



ARMY REGULATIONS, INDIA.

VOLUME XII.

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MILITARY WORKS.

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# ARMY REGULATIONS, INDIA.

VOLUME XII.

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## MILITARY WORKS.



Government of India,  
Army Department, 1914.

CALCUTTA  
SUPERINTENDENT GOVERNMENT PRINTING, INDIA  
1916.



## PREFACE.

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**T**HIS volume of Army Regulations, India, contains the orders of the Government of India on military works matters. It is intended primarily for the use of the officers and subordinates of the Military Works Services (including Military Works Accounts). Such subsidiary instructions as may be necessary for the efficiency of the Military Works Services will be framed in accordance with the spirit of these orders and will be issued by the Director General of Military Works.

Officers are expected to interpret these regulations reasonably and intelligently, with a due regard to the interests of the service. No attempt has been made to prescribe for necessary and self-evident exceptions, nor for such matters of detail as should be provided for by the Director General of Military Works.

The other volumes of regulations with which the Military Works Services are concerned are:—

King's Regulations.

Army Regulations, India, Vol I, "Pay and Allowances."

" " " " II, "Regulations and Orders for the Army."

" " " " III, "Financial Instructions."

" " " " VII, "Dress."

" " " " X, "Passages."

" " " " XI, "Clothing."

Army Tables, "Establishment and Supplies."

Army Act, and Indian Articles of War.

Civil Service Regulations.

Public Works Department Codes, Volumes I, II and III (in cases where they are applicable [see Army Regulations, India, Volume III, paragraph 289 and G. G. O. No 1037, dated the 15th September 1899, paragraphs 33, 34 and 35] and in cases which have not already been provided for in the Army Regulations).

W R BIRDWOOD, *Major-General,*  
*Secretary to the Govt. of India.*

(This book includes all corrections up to, and inclusive of, the April Appendix to India Army Orders, 1916.)



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## Abbreviations.

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A. D.	Army Department.
A. D. M. S.	Assistant Director of Medical Services.
A. F.	Army Form.
Appx.	Appendix.
A. R. I.	Army Regulations, India.
A. C. R. E.	Assistant Commanding Royal Engineer.
Bde	Brigade
Bde. Comdr.	Brigade Commander.
C-in-C.	Commander-in-Chief.
C. G.	Comptroller General.
C. R. E.	
C. S. Regs.	
D. A. A. G.	
D. A. G.	
D. G. M. W.	
D. G. O.	Director General of Ordnance.
Divn.	Division
Divl Comdr.	Divisional Commander.
E. Accts M. W.	Examiner of Accounts, Military Works.
G. E.	Garrison Engineer.
G. of I.	Government of India
Hd Qrs.	Head Quarters
H. S.	Higher standard.
I. A. F.	India Army Form.
I. S. M. D.	Indian Subordinate Medical Department
L. S.	Lower standard.
M. S. C.	
M. W. S.	
N. C. O.	
O. C.	
P. W. D.	Public Works Department.
P. W. F.	Public Works Department Form.
Q. M. G.	Quartermaster-General.
R. A.	Royal Artillery.
R. A. M. C.	Royal Army Medical Corps
R. E.	Royal Engineers
S. and T.	Supply and Transport.
S. D. Officer	Sub-divisional Officer
T. C. E. College	Thomson Civil Engineering College.
U. I.	Unattached List.
W. O.	War Office

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### Definitions.

In these regulations unless inconsistent with the context :—

Bde or Divl Comdr.	.	.	.	Includes the officer in temporary command of the Bde or Divn.
Bde Comdr.	.	.	.	Includes the Divl. Comdr., in the case of stations and troops directly under Divl. Hd. Qrs.
Divl Comdr.	.	.	.	Includes the officer commanding an independent brigade.
Soldier	.	.	.	Includes warrant officer and non-commissioned officer.
Subordinate establishments	.	.	.	Means all establishments in the M. W. S. except R. E. and Garrison hospitals.
Office establishment	.	.	.	" " " " " " " " " " " "
Petty establishment	.	.	.	" " " " " " " " " " " "
Local M. W. officer	.	.	.	" " " " " " " " " " " "
Military buildings	.	.	.	" " " " " " " " " " " "
Regimental buildings	.	.	.	" " " " " " " " " " " "
Primary buildings	.	.	.	Are those used only for dwelling purposes, e.g., barracks, quarters and hospitals.
Subsidiary buildings	.	.	.	Are the outhouses, etc., of primary or auxiliary buildings, e.g., cookhouses, latrines, wash-houses, servants' quarters, enclosure walls, etc.
Auxiliary buildings	.	.	.	Are all buildings other than the above, e.g., guard rooms, work shops, institutes, mess-houses, offices, bakeries, stores, factories, etc.
Fixtures	.	.	.	Means all articles fixed or bolted to the structure of a building. This includes punkas and their attachments, except fringes and pulling ropes which are furniture.
Furniture	.	.	.	Means all movable articles necessary for the accommodation of the occupants of a building.



Paras. 1-6.

## ARMY REGULATIONS, INDIA.

### VOLUME XII.—MILITARY WORKS.

#### Organization and Administration.

1. Military works in India and all duties connected therewith are carried out by the M. W. S., except in certain localities where they are under the control of the local P. W. D. In some cases, under the orders of the G. of I., the M. W. S. carry out all civil works in a province; they may also be required to execute works for a local Government or civil department.

Execution of military works

#### Establishments.

2. The establishment of the M. W. S. consists of—

(a) R. E. officers who are regarded as in regimental employ, and are subject in all respects to A. R. I.

Military Works establishments

(b) Subordinate establishments—

(i) Upper subordinates.

(ii) Barrack department.

(iii) Lower subordinates.

(iv) Office, peon and petty establishments.

(c) Accounts branch—

(i) Examiners.

(ii) Accountants.

px. I. The  
D. G. M. W.  
the M. W.

3. R. E. officers in excess of the sanctioned establishment will be appointed to the M. W. S. in the order in which they join for duty, irrespective of rank. Vacancies caused by officers who are absent but not seconded, will not be filled, nor will acting appointments be made, except for C. R. Es. and A. C. R. Es.

Appoint-ment of officers

#### Administration.

4. The D. G. M. W. administers the M. W. S. and is responsible for their organization, discipline, and efficiency. In submitting proposals upon matters of importance to the G. of I., he will first obtain the views of the C. in C.

Office of the D. G. M. W.

The D. G. M. W. is responsible that no major work is undertaken until it has been authorized by the G. of I., and that no departure from standard designs is made without authority. He will inspect, or depute any officer to do so, any important works under his control.

5. The C. R. E. is responsible for the efficiency of the M. W. S. in the Divn, with the exception of those works which may be under the P. W. D. He will, under the orders of the Divl. Comdr., carry out such inspections as may be necessary.

Office of C. R. E.

Similarly the A. C. R. E. of an Independent Bde., and the G. E., Bangalore, will be responsible within their respective charges.

The C. R. E. will make an annual inspection of the offices of the A. C. R. Es. under his command.

6. The F. Accts. M. W. is the financial adviser of the D. G. M. W., and also the independent auditor, on behalf of the G. of I., of expenditure on military works. He is responsible under the D. G. M. W. for the maintenance of financial regularity and correct account keeping throughout the M. W. S.; at the same time he is the head of the Accounts branch of the M. W. S., and as such is directly under the orders of the C. G., with whom he will communicate freely.





The Brigade Commander can withhold a sanctioned allowance, if he deems it desirable to do so for any reason.

15. The duty of a store-keeper will be confined to the custody, preservation, and issue of stores, except furniture, and keeping accounts of them; he will issue stores only on an indent signed by an officer or S. D. officer Store-keepers.

16. An accountant is responsible to the A. C. R. E. for the accuracy of all account transactions and for the correct compilation of the district accounts in accordance with the prescribed rules. Duties of Accountant.

17. The estimate for a large work should make separate provision for any temporary officers that may be required, if their pay exceeds Rs. 250 a month. A report must simultaneously be submitted to the G. of I. giving details of the temporary staff required and the necessity for it, also whether any suitable men can be obtained locally Employment of temporary officers.

(i) No single salary should exceed Rs. 950 a month.

(ii) The rate of pay sanctioned for each individual cannot be increased.

(iii) Sanctions will only hold good for twelve months: if an extension is required application must be made at least three months before the sanctioned period expires

(iv) An engagement for a special work lasts till the work is finished; otherwise, and except in cases of serious misconduct, a temporary officer is entitled to one month's notice, or pay in lieu, before discharge.

(v) Temporary employes will not be graded nor gazetted.

Temporary employes may also be engaged, under the above rules, for general duties, to supplement the permanent establishment.

## Personnel.

### Officers.

18. Young officers should, as a rule, be kept at the Hd. Qrs of a district to learn the system of work and accounts and to study the language; they should prepare designs, plans, and estimates for works required, and may, under the orders of the A. C. R. E., visit any large works or workshops in the vicinity. Instruction of young officers.

R E subalterns on arrival in India for a first tour of service are attached for a period of 4 months to a corps of sappers and miners, under the orders of the D. G. M. W., for training before joining the M. W. S. In the case of the additional officers for the defence light sections, this attachment will come immediately after the period of one month spent at the port on arrival in India. During the period they are attached to the sappers and miners, their pay, etc., will form a charge against M. W. funds, see A. R. I., Vol. I

19. The records of service of all officers of the M. W. S. are kept by the M. S. C. Records of service.

### Upper Subordinates.

20. A combined establishment of the M. W. S. and the D. G. M. W. will be formed, the strength of which will be adjusted, as the total strength of the establishment increases or decreases, on the following scale, viz.:- List of upper subordinates, Departmental commissions and warrants.

1/3ths of the total number of military subordinates will be divided between the commissioned and warrant ranks, in the proportion of 1 to 6, the former being sub-divided as follows:-

1/3th	Commissionaries.
1/3th	Deputy Commissioners.
1/3th	Assistant Commissioners.

and the latter being sub-divided as follows:-

1/3th	Contractors.
1/3th	Sub-contractors.

The remaining  $\frac{3}{4}$ ths of the total number of military subordinates are staff serjeants and serjeants.

In calculating the proportion of ranks admissible on the combined list, subordinates who join the M. W. S. or P. W. D. as passed apprentices will be regarded as being on the list only from the date of their permanent appointment, within the sanctioned scale, to the M. W. S. or P. W. D., and not from the date of their transfer to the U. I.

Military promotion is contingent on departmental efficiency, and a warrant officer is not eligible for the rank of assistant commissary unless he is a sub-engineer.

Appoint-  
ments of  
upper subor-  
dinates

22. Upper subordinates may be appointed to the M. W. S. from the following sources:—

Passed students of the T. C. E. College.

N. C. Os. and soldiers of R. E.

Lower subordinates.

Soldiers or civilians with practical qualifications or college certificates.

The qualifications for appointment are given in I. A. F. U. 1740, and are equally applicable to soldiers or civilians.

Passed  
students  
of the  
T. C. E.  
College.

23. Twelve British N. C. Os. will, on passing the examination, be admitted annually into the T. C. E. College. Six of these who pass highest, if within the first fifteen or sixteen, in alternate years, as the case may be, at the final examination held at the end of the two years' course, will be appointed to the M. W. S. as apprentice overseers, 1st grade, for one year, during which they will remain students of the college, but are trained in their duties by the M. W. S. On permanent appointment all military overseers, whether appointed from an engineering college or direct from their corps, receive an outfit allowance of Rs. 150.

Reserved  
vacancies.

24. All vacancies occurring in the permanent establishment reserved for the M. W. S. shall be filled by the M. W. S. and shall not apply to the P. W. D. or to the U. I. The M. W. S. shall not apply to the P. W. D. or to the U. I. The M. W. S. shall not apply to the P. W. D. or to the U. I.

qualified men. If on the 10th July there are not sufficient vacancies to absorb all the apprentice overseers, those in excess will be posted as supernumeraries on the M. W. list, their pay pending absorption being charged to the permanent establishment.

Term of  
probation.

25. All overseers, except apprentices who have undergone their training, will be appointed on probation for one year, or more, if necessary.

Exchange of  
upper subor-  
dinates

26. Upper subordinates of the M. W. S. may exchange with those of other Administrations, with the approval of the D. G. M. W. and the head of the Administration concerned.

Recommend-  
ation for  
provincial  
service.

27. The names of upper subordinates, recommended for promotion to the provincial establishment, will be submitted by the D. G. M. W. to the G. of I., P. W. D.

#### Barrack Department Establishment.

Gratuation  
list for  
military  
promotion

28. Members of the Barrack Department are borne on a separate list for promotion in the Barrack Department (see para. 21).

Note.—The Punjab-Bengal list will, for the present, constitute the General List which will automatically expand as the old Madras list disappears (see Appendix I, Table 2, Barrack Department).

Depart-  
mental  
grading.

29. The departmental grading is as follows:—

Departmental officers with hono-

rary rank and Conductors

Sub-Conductors

Staff Serjeants and Serjeants

Barrack Masters,

Assistant Barrack Masters.

Barrack Serjeants

Recruit-  
ment.

30. Barrack department subordinates will be recruited from regiments and corps. Applications from candidates should be submitted on I. A. F. U-1740, which gives the necessary qualifications for appointment.

**General.**

31. One messenger is allowed for each officer and, when absolutely necessary, one for each S. D. officer. Other office servants will be sanctioned separately for the Examiner's, C. R. Es., A. C. R. Es. and G. Es. offices, as required.

32. Movements due to privilege leave of upper and lower subordinate members of the barrack department, and clerks, draughtsmen, cashiers and storekeepers of all grades, will be reported to the O. R. E.

All movements of officers, and movements not due to privilege leave of upper subordinates, lower subordinates, 1st and 2nd grades, members of the barrack department, clerks drawing above Rs. 70 per mensem, draughtsmen, cashiers and storekeepers of all grades, will be reported to the G. C. M. W. and those of other subordinates to the G. P. E.

*Paragraph 33.*—After the words "C S. Regs." in line 2 insert a <sup>Oct. Appx</sup> comma and add "except as provided for in Army Regulations, India." <sub>I. A. O.—1917.</sub>

to joining time, local, travelling and acting allowances (except that they receive temporary promotions from grade to grade).

The appointment of a substitute in place of an upper or lower

Add the following :—

" 33-A.--A civilian (other than a menial) on appointment to the permanent establishment of the M. W. S. shall be required to sign I. A. F. Z-2055."

"	"	"	23	"	"	"	"	havildar	7
"	"	"	24	"	"	28	"	as jemadar	15
"	"	"	25	years' service, as	subadar				30
"	"	"	32	"	"			if of unblemished character and specially recommended	50

He may, however, take the pension of his actual military rank should it be higher. Pension can only be claimed after 15 years' service

should be to grant pension only to citizens after 25 years service  
 and when the applicant has been recommended unfit for further service  
 service, the pension of

If an Indian soldier  
service is pensionable

to the department in  
his service. An Indian

soldier on the U. L. may be granted leave under the uncovenanted service leave rules, provided that the State is put to no extra expense.

35. Permanent military upper subordinates and members of the Examination

<sup>1</sup>subordinates of the R. W. D. (See R. W. D. Code.)

37. Leave to a civilian in the M. W. S. can be granted by the authority **Leave.**

who would fill up his appointment if vacant except in the case of establishments and leave of all

from the A. O. B. Es., G. E.,  
Central Workshop, Burki, are the

to clerks in any grade and all grade and below is sanctionable

by C. R. Es., and privilege leave to any clerk employed under them is sanctionable by A. C. R. Es. and the G. E. Rangoon. The application

of a civilian must be made through his immediate superior, and the officer who keeps the applicant's service book should certify that the

the officer who keeps the applicant's service book should certify that the leave is admissible.

The remaining  $\frac{2}{3}$ ths of the total number of military subordinates are staff sergeants and sergeants.

In calculating the proportion of ranks admissible on the combined list, subordinates who join the M. W. S. or P. W. D. as passed apprentices will be regarded as borne on the list only from the date of their permanent appointment, within the sanctioned scale, to the M. W. S. or P. W. D., and not from the date of their transfer to the U. I.

Military promotion is contingent on departmental efficiency, and a warrant officer is not eligible for the rank of assistant commissary unless he is a sub-engineer.

Appoint-  
ments of  
super subor-  
dinate

22. Upper subordinates may be appointed to the M. W. S. from the following sources:—

Passed students of the T. O. T. College.

N. C. Oa. and soldiers of H. E.

Lower subordinates.

Soldiers or civilians with practical qualifications or college certificates.

... given in I. A. F. U. 1740, and

Passed  
students  
of the  
T C E  
College.

passing the examination, by  
Six of these who pass  
as the case  
cars' course,  
grade, for  
ago, but are  
appointment all

military overseers, whether appointed from an engineering college or direct from their corps, receive an outfit allowance of Rs. 150.

Reported  
incidence

24. All vacancies occurring in the upper subordinate establishment between the 1st May and 16th July of each year will be reserved for the absorption of the six passed apprentices; this rule does not apply to the thirteen mechanical and electrical engineering posts, vacancies in which will be filled "as they occur by the appointment of specially qualified men." If on the 16th July there are not sufficient vacancies to absorb all the apprentice overseers, those in excess will be posted as supernumeraries on the M. W. list, their pay pending absorption.

**Term of  
Expiration**

**Exchange of  
upper subor-  
dinate**

Recommendation for provincial service.

to the provincial establishment, will be submitted by the D. O. M. to the G. of L. P. W. D.

### **Barack Department Establishment.**

Gratulation  
list for  
military  
promotion.

28

for pa

in the

DATA.

1. The General List constitutes the General List  
2. The General List appears (see Appendix 1)

Departmental  
ending

### Army rank and Conductors

Sub-Conductors -

Staff Serjeants and Sérjeants

Barrack Masters.

Assistant Barrack Master.

Recruitment.

30. Barrack department subordinates will be recruited from regiments and corps. Applications from candidates should be submitted on I. A. F. U-1740, which gives the necessary qualifications for appointment.

46. Serious cases of misconduct or neglect of duty on the part of civil upper subordinates must be reported to the D. G. M. W. If a lower subordinate, who has passed through the T. C. E. College, is dismissed, the fact, with the cause of his dismissal, should be communicated to the Principal.

47. All members of the M. W. S. (except civilian clerks at presidency towns, see Vol. VI) are entitled to gratuitous medical attendance, in cantonments from the staff surgeon, elsewhere from the civil surgeon or medical subordinate according to whether they are drawing over or under Rs 250 a month. Attendance at a distance of five miles or more should not be required of a medical officer, except under extraordinary circumstances; if the distance is more than two miles the cost of conveyance for the medical attendant will be paid by the patient.

48. In the case of large works on which many persons are employed the officer in charge should apply to the Bde. A. D. M. S. for special medical assistance, the cost of which will be sanctioned under the rules for increase to establishment.

50. All unusual losses in the manufacture of materials and serious accidents connected with works should be reported by the local M. W. officer to his immediate superior.

51. The D. G. M. W. is empowered to sanction the supply of tents for M. W. purposes in accordance with the C. S. Regs. They should be obtained through the ordnance department. The usual hire charges must be paid on account of tents obtained for the personal use of individuals not entitled to free quarters.

### Military Land and Buildings.

#### Land.

52. No military land shall be taken up or occupied by any civil department, for any purpose whatever without the sanction of the Government of India in the Army, the Principal Commander and Quartermaster situated on military land shall acquire by any civil department of the local government on all such proposals should be recorded. Before negotiations are entered into with the civil authorities for the land to will

kept in repair by the M. W. S.

54. In every station a fixed datum level and other permanent bench marks connected with the great trigonometrical survey should be established and recorded. All levels on the cantonment plans should refer to this datum.

55. The A. O. R. E. or G. E. is responsible for the proper drainage of the cantonment, and no work, public or private, affecting the general drainage scheme shall be commenced without his approval.

#### Roads.

56. No old road in a cantonment may be closed or new one opened without the sanction of the Divl. Comdr and no road may, in the first instance, be metalled at the public expense without the sanction of the G. of I. except a cantonment fund road in a self-supporting cantonment which may be metalled with the sanction of the Divl. Comdr, provided the cost involved can be met from existing provision in the budget estimate of the cantonment.

Classification and maintenance of roads in cantonments.

57. Classification and maintenance of roads in cantonments.

- (a) *Imperial Civil or Provincial Roads.*—These consist of the sections of the main arterial communications of the country, required for all purposes independent of the existence of civil . . . as the remainder of the roads of which they form a part
- (b) *Imperial Military Roads.*—These are roads required for purely military purposes, such as those within the lines occupied by regular troops, or leading from those lines to the railway station, or to the main lines of communication of the country, or those effecting communication between the main roads in the cantonment and buildings used for military purposes. The cost of maintaining these roads is met from military works funds.
- (c) *Cantonment Fund Roads.*—These are roads required merely for the convenience of residents in the cantonment; they are maintained from cantonment funds.

The classification of roads in each cantonment will be considered by the Standing Barrack Committee.

(For procedure see Army Regulations, India, Volume II.)

Buildings.

Standard designs.

58. Deviations from standard designs of buildings which affect authorized areas or general principles of construction, require the sanction of the G. of I. and, if no standard plan of a regimental building exists, the design must be approved by the G. of I. The D. G. M. W. can authorize deviations from standard designs of buildings provided that authorized areas and general principles of construction are not altered and the cost is not materially increased.

Numbering of buildings.

59. Every regimental building will have a distinguishing number conspicuously painted on it, by which it will be entered in the return of public buildings; each room in a building will also be numbered and its area, cubic contents, and the purpose for which it is used, will be painted on one door. The number of lamps allowed for each barrack or separate portion of a barrack, ward or reading room of a hospital, sergeants' mess, or prayer room used by British troops, will also be painted on one door.

Return of public buildings, record plans.

60. A detailed register of the accommodation provided by every building shall be maintained on the return of public buildings.

61. The following plans must be kept on record:—

- (i) In C. R. Es.' offices—  
Plans of all cantonments in the Divn.  
Copies of all standard and type plans.
- (ii) In A. C. R. Es.' and G. Es.' offices:—  
Cantonment plans.  
Block plans of each set of barracks, scale  $\frac{1}{800}$ .  
Record plans of military land.  
Plans of roads.  
Record plans of all buildings and works.  
Copies of standard and type plans.

All fair drawings submitted to Army Hd. Qrs. or the G. of I. should

Re-appropriation of buildings.

permanent, and a state-acks is not affected, may be sanctioned by the Bdo. Comdr., provided that the purpose to which it is to be appropriated is authorized. If the purpose is an unauthorized one, it can only be sanctioned by the Divl. Comdr. and any expenditure involved requires the sanction of the G. of I.

The O. C. the station may sanction a temporary re-appropriation, if urgently necessary, provided that it does not affect the dormitories or day rooms of the men, or the quarters of the N. C. Os. Such temporary re-appropriations must be reported at once to the Bde Comdr and sanction must be renewed annually.

The D. G. M. W., or the local Government concerned, with the previous concurrence of the Divl. Comdr. in the case of buildings in P. W. D. charge, may sanction the loan of military buildings which are not rentable or required for military purposes to regimental or cantonment authorities or other public bodies, on the understanding that they are kept in proper repair and relinquished without claim for compensation if required for military purposes. The D. G. M. W., with the approval of the C-in-C., may lend any vacant military building to a local Government.

63. Proposals for the demolition or sale of military buildings will be submitted on I. A. F. W-1819. G. Os' C. Divns. and Independent Bdes. may sanction such proposals (except as regards remount buildings) subject to the following conditions:—

Disposal of  
 useless  
 buildings.

- (i) That the book value of the building does not exceed Rs. 2,500.
- (ii) If the building has to be replaced, that it is an authorised one, that the cost of replacement will not exceed Rs. 2,500 and that the G. O. C. is prepared to find the necessary funds from his grant for minor works.
- (iii) That no question of the transfer of military land is involved.
- (iv) That, in cases where it would be practicable for the local

through the Bde. and Divl. Comdr. to the D. G. M. W. for approval in the case of stations under the M. W. S., and to the local Government or Administration concerned, through the Q. M. G. in the case of stations under the P. W. D.

In the case of remount buildings at stations under the M. W. S. the proposals will be submitted by the G. E. through the A. C. R. E. and the Superintendent of the Remount Depot concerned to the C. R. E.

matter at once to the Bde. Comdr.

65. Inspection houses are sanctioned, where necessary, for the use of officers and subordinates of the M. W. S.

Inspection  
 houses.

66. The following are the principles on which volunteers may be

Buildings  
 lent to  
 volunteers.

I be

the  
 The

- (iii) If they are again resumed, the G. or I. will compensate the corps for any outlay on additions or alterations, but not on repairs.



(iv) If the corps ceases to exist, the buildings will revert to the G. of I.

Intimation  
of com-  
mencement  
work.

67. When any new work or extensive alterations or repairs to a building are about to be undertaken, due notice should be given to the O. C. or departmental officer and, if necessary, the building should be taken over by the local M. W. officer for the purpose.

Inflammable  
materials.

68. The erection of inflammable screens, partitions and the like is

Water  
tanks.

69. For all military buildings with inflammable roofs, or walls, water

Lightning  
conductors.

Butts and  
ranges.

be maintained by the M. W. S., but compensation for damage to cultivation is not debitable to the M. W. grant. Rifle ranges must be maintained in good repair by the corps in charge; repairs to, or renewal of, the wood-work or masonry of firing platforms, markers' butts, galleries and trenches will be carried out by the M. W. S. When a corps is absent the range will be taken over and maintained by the M. W. S.

Covers for  
wells.

72. All Government wells, the water from which is used for drinking or cooking purposes, are to be provided by the M. W. S., with covers to prevent contamination.

Irrigation  
of soldiers'  
gardens.

73. Wells, reservoirs and water-courses, for the irrigation of soldiers' gardens, will be constructed and maintained by the M. W. S. Where Persian wheels are used they will be supplied complete in the first instance by the M. W. S. and thereafter repaired regimentally.

#### Punkahs.

Punkahs.

74. Punkahs are authorized in the following military buildings for British corps:—

Barracks, dining halls, hospitals, and quarters for all regimental warrant officers, school-mistresses, N. C. Os., soldiers, and their families; regimental institutes, liquor bars, serjeants' messes, orderly, guard, school, and prayer rooms; offices, workshops, and cells (if specially recommended by the medical officers); also in the public quarters of officers, lady nurses, commissioned, warrant and N. C. Os. of the U. L., the I. S. M. D., and those in staff employ.

Punkah fringes, pulling ropes, and canes will be supplied free, except in the case of officers' quarters (other than those of the U. L. and I. S. M. D.) and liquor bars.

Punkahs  
to be con-  
nected.

75. The local M. W. officer is responsible that all punkahs are economically and efficiently connected, wherever practicable, in trains.

#### Quarters.

Assessment  
of rents.

76. Rents for all public quarters are assessed in accordance with the following rules under which the G. R. E. is authorised to fix the rent of a building except when otherwise fixed by the G. of I.:—

I.—The annual rent shall be sufficient to cover interest at 3½ per cent. on the capital cost of the building and its site, together with the average annual charges for maintenance and repairs.

II.—The capital cost includes the cost of the building and its site. If the house was constructed on land purchased by Government, the value of the site will be the price paid for it by Govt.; if not, it will be the value at the time these rules are first applied. If the site was Govt.

land originally, then only such further outlay as may have been incurred on the site should be included. If there is no record of the cost of the building, by construction or purchase, its value should be assessed by the A. C. R. E. and approved by C. R. E. In the case of houses purchased by Govt., the capital cost will be the price actually paid for the property together with the amount of the works outlay incurred by Govt. in altering, restoring or improving the building. When the capital cost is greatly in excess of the real value, application should be made to the G. of I. for sanction to the reduction of value, particulars being given as in para. 85.

The D. G. M. W. may decide what proportion of the cost of renewals due to fire or other cause should be charged to the capital cost, but must report his decision to the G. of I.

### III.—Maintenance

annual and quadren

for special repairs.

### IV.—Establishment

in either the capital cost or maintenance charges.

V.—If a part of a building is used as an office for which accommodation is authorised, the rent shall be proportionately reduced.

VI.—Assessments of rents of buildings occupied by Divl. Comdrs. shall be fixed by the D. G. M. W.

77. Additions and improvements to an officer's quarters are authorised only in a case when the enhanced rent, due to such alterations, and assessed according to rule, falls within the limit. Additions and improvements

Para. 77, sub-para.—In line two after the words "D. G. M. W." Oct. Appx  
add "or of the Local Governments and Administrations concerned in" I. A. O.—1918.  
the case of rentable buildings in their charge." M. W. 3023.

are maintained.

78. The rent charged to a Government official shall not exceed 10 per cent. of his salary (including local allowances), but, if drawing presidency house-rent, the limit shall be increased to the extent of that allowance. The maximum rents chargeable to military officers are laid down in A. R., I., Vol. III. Rent chargeable to Government officials.

NOTE.—In the case of members of the upper subordinate establishment and temporary upper subordinates of the M. W. S. (supervisors and overseers) and apprentice overseers who were in the service on the 19th May 1911, the maximum monthly rents chargeable are as stated below:—

	Rs
Supervisors, 1st grade	15
Do., 2nd grade	10
Overseers, 1st grade	7
Do., 2nd and 3rd grades	6

79. The rent to be paid by any Government servant whose salary does not exceed Rs. 50 a month may be fixed by the D. G. M. W. or remitted altogether. If his salary (including local allowances) is over Rs. 50 and not over Rs. 100 a month, the D. G. M. W. will fix the rent subject to a minimum of 5 per cent. of salary or the assessed rent of the building whichever is less. Officials drawing less than Rs. 100 a month.

80. When two or more officers occupy one set of quarters, the rent shall be charged proportionately to each. Quarters occupied jointly

81. When a private house is hired on a system the rent shall be paid by the person who pays the rent actually paid.

tenants for vacant Tenants for vacant buildings.  
hall be charged at Rent chargeable to a private person.  
d it is not less than

A. R. I., Vol. XII.

Insert the following as paragraph 81-A.

81-A. G. O's. C. Divisions and Independent Brigades may sanction temporary reductions or remissions of the rent of military buildings within their jurisdiction, occupied by Government servants, provided that such reductions or remissions do not involve a loss to the State of more than Rs. 100 in the case of any particular building or of any individual person during one financial year, and that a report, together with a statement of the reasons for which the concession has been granted, is made at once to the D. G. M. W. and the Examiner of Accounts, M. W.

July Appx.  
I. A. O.—1918.  
6517 M. W.

The exercise of these powers should be confined to cases which are not covered by para. 79 or para. 81, and in which the levy or recovery of the full rent due under the ordinary rules would be inequitable in the public interests or would, for special reasons, constitute hardship.

- i. Actual value of the house and site.
- ii. Rent chargeable under the rules.
- iii. Salary, including allowances, of the officer.
- iv. Date proposed for grant of free quarters.
- v. Specific grounds for the concession.

Rent lists. 87. Rent lists will be prepared on P. W. F. 41A. and submitted at the end of each month by the local M. W. officer, in the case of—  
Regimental officers . . . to the O. C. unit.  
Staff officers and officers R. A. M. O. . . to the officer concerned.  
Departmental officers and subordinates . . . to the senior officer of the department.

Officers in civil employ . . . to the treasury officer concerned.  
When a staff officer, or officer of the R. A. M. O., quits his quarters

to the date of relief, unless he produces a special certificate from the local M. W. officer altering this date.

Rent from pensioners and private persons is to be recovered monthly in advance by the A. C. R. E.

Bills for electricity consumed in Government buildings will be similarly prepared and submitted.

M. W. subordinates not entitled to quarters 88. Subordinates of the M. W. S. (except those of the barrack department) are not entitled to public quarters; but if allowed to occupy them they will pay the assessed rent subject to the maximum laid down in para. 78

Quarters for unmarried school-mistresses. 89. An unmarried school-mistress is not to be allotted quarters in a detached building or in the block for married rank and file; but should be given class A quarters in the staff sergeants' block.

Scale of furniture. Furniture.

Furniture designs.

provided the general principles are not altered and the cost is not materially increased.

92. An annual verification of the furniture in charge of corps and departments will be made on or about the 31st March by the officers who make the quarterly barrack inspections. An officer, or subordinate of the barrack department, will also be deputed to count the furniture in store, and certify to its existence. Annual verification of furniture.

From the ledgers thus checked the distribution returns (I. A. F. W-1814), and the annual register of furniture in the station I. A. F. W-1815) will be compiled.

### Works.

#### Procedure.

93. Original works include all new works, additions to existing works and repairs to newly purchased works. They are divided into three classes:— Classification of works.

- (a) Special works are works the cost of which exceed Rs. 50,000 those forming part of a general scheme costing Rs. 50,000 or more, and those which irrespective of their cost the Government of India order to be placed in this class.
- (b) Ordinary major works are works costing more than Rs. 2,500 but less than Rs. 50,000.
- (c) Minor works are works costing not more than Rs. 2,500. Expenditure on a work costing less than Rs. 10 may be charged to the repairs grant.

93-A. Alterations and renewals or extensive repairs, which entail the substitute of a superior for an inferior class of work, will be treated as original works for budget purposes and in the accounts during execution; that is, 'provision to meet the whole expenditure involved will be made under 'original works.' On the completion of the work, if the final cost exceeds the value of the old work less the value of any of the old material utilized, the difference between the two will be treated as a charge "Original works" and the remainder as a charge against 'repairs': if the final cost is equal to or less than the value of the old work less the value of materials utilized, the whole expenditure will be charged to 'repairs'. An application will then be submitted for a reappropriation of such portion of the grant from 'original works' to 'repairs' as may be necessary to allow of that portion of the expenditure debitable to 'repairs' being charged to that head. When the adjustment has been made, the 'original works' portion of the cost will be added to the capital value of the building in the 'Annual Return of Public Buildings'. If the cost of the new work is less than the value of the old work less the value of materials utilized, the difference will be deducted from the capital value. Renewals.

94. Before any work can be carried out all of the three following conditions must be fulfilled:— Preparation and sanction of estimates.

- (a) Administrative sanction must have been accorded to the execution of the work under general or special orders.
- (b) Technical approval to the detailed estimate must have been given by the authority mentioned in para. 104.
- (c) The expenditure must have been sanctioned by competent authority (see A. R., I, Volume III) and funds allotted. When an allotment for a special or ordinary major work appears in the final issue of the budget estimate, this condition may be regarded as having been fulfilled in respect of that work.

95. In the case of ordinary major and minor works which have been authorised by the Government of India in the regulations or by separate orders of general application, no further administrative sanction is necessary.

sary. In the case of special works or major works which involve a departure from standard designs and authorised arrangements the approval of the Commander-in-Chief or the head of the department concerned, and the sanction of the Government of India to the details of the scheme will be obtained by the D. G. of M. W. or P. W. D. For unauthorised minor works see A. R., I., Volume III.

95. A If it is found when necessary that the work is of a nature which requires the approval of the Commander-in-Chief or the head of the department concerned, and the sanction of the Government of India to the details of the scheme will be obtained by the D. G. of M. W. or P. W. D. For unauthorised minor works see A. R., I., Volume III.

approved detailed estimate, a report on the subject should at once be made to superior authority. In the latter case the report will be made by means of a work slip.

Sanction to a work in parts. Funds not transferable.

96. Sanction may not be accorded to carry out in portions a work the total cost of which is beyond the powers of the sanctioning officer.

97. Funds allotted to a work may not be utilized on any other work without re-appropriation by the competent authority.

In first clause of paragraph 98 before the word "Division" insert Oct. Apps. I. A. O.—1918.  
Command". M. W. 6567.

For clearance themselves.

Railway defence works.

99. The construction of defence works, such as bridge block-houses, etc., on railways, if within a reasonable distance of a M. W. district, will be carried out by the M. W. S, unless the railway administration concerned consider that this course cannot be adopted with safety to the railway.

If the work is undertaken by the railway administration, the M. W. S. will be consulted.

Troop sidings.

work will be carried out by the railway concerned. When the amount of land required is considerable it may be taken up and paid for by the M. W. S. and marked off as military land, otherwise it will be included in the railway land.

#### Civil Works.

Relations with civil officers.

101. M. W. officers should assist civil officers with reports and rough estimates of the cost of any proposals, but detailed estimates and designs should not be prepared for works costing more than the civil officers concerned can sanction.

Procedure for civil works.

102. A civil officer will submit a requisition for any work he may require to be done by the M. W. S. If funds are available, and it is

or local Government concerned or submit it to the G. of I. for orders.

In the Baluchistan Agency and North-West Frontier Province, provincial civil works will be dealt with by the C. R. E. under the orders of the local administration.

G. Os. O. Divns. and Bdes. are not concerned with the administration of civil works funds or civil works executed by the agency of the M. W. S., which are dealt with by the officers of the M. W. S., under P. W. D. Code rules.

In the case of works connected with ecclesiastical buildings, special rules are laid down in P. W. D. Code, Volume III, Appendix 10, on the subject of the sanction required for various classes of these works.

The powers of the officers of the M. W. S. in regard to civil works estimates and excesses thereon, are regulated in accordance with P. W. D. Code rules, the C. R. E. corresponding to the rank of Superintending Engineer, A. C. R. E. to that of an Executive Engineer, and G. E. to that of an Assistant Engineer.

The limits of civil works are different from those prescribed in the case of military works expenditure.

103. Contribution works are those executed from funds of a public nature (not Government funds), or from subscriptions by the public. If a work is to be done partly from Government funds and partly by subscription, the latter will be treated as an addition to the Government grant and the work executed under the usual rules. The money must be paid into the treasury before any liability is incurred, unless its receipt by instalments is authorised by competent authority. The design and estimate will be prepared in the usual manner, but, prior to the work

charge to keep the authority concerned informed of the progress of the work and of any excess or deficit anticipated.

#### Estimates.

104. The C. R. E. has power to sanction estimates for sub-heads of manufacture operations and, Sanction to estimates.

or large projects covered by lump sum sanctions; works for other departments, if urgent or the head of the department concerned has not sufficient powers; contribution works; furniture.

The C. R. E. of a Diyn. has similar powers within a limit of Rs. 25,000, except in regard to new works forming part of a project sanctioned by higher authority, in which case he must be specially empowered.

The C. R. E. has also power to approve estimates for manufacture operations irrespective of limit when the material is for a work already duly sanctioned or for reserve stock within the sanctioned limit of the district concerned.

A. C. R. Es. have similar powers up to Rs. 10,000, except in regard to new works forming part of a project sanctioned by higher authority, in which case they must be specially empowered.

The powers of officers officiating as C. R. Es. and A. C. R. Es. are limited to Rs. 10,000 and Rs. 2,500 respectively. In special cases the D. G. M. W., can, at his discretion, enhance the powers of officiating officers up to the limits specified for permanent C. R. Es. and A. C. R. Es. He can, also at his discretion, reduce the technical powers of any individual officer by name.

G. Es. have power up to Rs. 500 in regard to estimates for minor works, for subsidiary works of large projects covered by lump sum sanctions, and for contribution works, but may be empowered by the C. R. E. to approve estimates beyond that amount but not exceeding the limits of a minor work.

Form of  
estimate

105. An estimate should contain—

- (i) A list of references with a précis of the correspondence calling for the work.
- (ii) A report explaining clearly the necessity for the demand, the reasons for the design adopted, and any other points that require elucidation.
- (iii) A general specification describing the different kinds of work proposed and referring to the standard specifications in use in the district, with full details of specifications and rates for all works not included in the standard lists.
- (iv) Calculations for stability of structure and strength of materials used, where necessary.
- (v) Detailed measurements of all the works to be carried out.
- (vi) An abstract giving the total quantities and rates of each kind of work with the cost in rupees; all incidental expenses such as compensation for land, sheds for workmen, etc., should be included, with an addition of 5 per cent. on the total for unforeseen contingencies. Any work establishment required will also be entered. The total cost of the whole will be given. For a large project consisting of several separate works, an abstract of each should be given and the totals brought together on a general abstract showing the cost of the whole project.

The estimate forms are I. A. F. W-1793-1793.

Before submitting any estimate for consideration, the local M. W. Officers should obtain the approval of the Officer Commanding or departmental Officer concerned, and of the Officer Commanding the station or Brigade Commander.

Drawings to  
accompany  
estimates.

106. The drawings to accompany a project will usually consist of—

- (i) A site plan with all details necessary.
- (ii) Plans of the ground floor and foundations of a building, of each floor if required, and of the roof.
- (iii) Such sections and elevations as may be necessary to show the dimensions of the building.
- (iv) Working drawings of details.

Scales and full dimensions should be given and every sheet should be

Road  
projects.

w; levels and  
road and the  
of the drains

- (iii)
- (iv) Drawings of all structures proposed.

For submission to the G. of I. a road project need only contain a report with a brief note on the proposed gradients, a general map, an abstract of cost, and plans of any important works.

When any new road has been completed a correct plan of it should be

Bridge  
estimate.

giver  
area  
prop

Paras.  
estimates.

A. F.  
para.

to complete the authorised scale due to new patterns, increase of scale,

or articles having become unserviceable. Special estimates are only necessary when the requirements could not be foreseen and included in the annual estimates.

110. A schedule of rates with standard specifications for each kind of work in common use in the district will be maintained in the offices of the A. C. R. E. and G. E. Schedule of rates and specifications.

#### Execution of works.

111. A work establishment consists only of men temporarily employed on a particular work for subordinate supervision or accounting for stores and labour, whose pay must not exceed Rs. 250 a month and must be covered by the current and sanctioned rates in the estimate; it does not include the establishment of office clerks. work establishment.

Purchase of stock

work up to Rs 200.

113. The A. C. R. E. or G. E. will bring to the notice of the Bde. Comdr. or O. C. the station any work to be carried out from M. W. funds on which the troops may be suitably employed. Military labour will ordinarily be employed on a system as nearly similar to the contract system as is possible. The rates to be paid will not exceed those at which similar work in the same locality could be carried out by civil contract, the C. R. E. being the sole authority for deciding that such rates are not excessive. Payment will be made direct to the O. C. the troops who will determine the amounts to be paid to the men, and also will, as in the case of a civil contractor, be required to meet from his contract payments all extra expenditure connected with the employment of the troops, including any excess over the rates of compensation for dearness of provisions provided for in the estimate. Employment of military labour.

the employment of military labour will be accepted against the military estimates, and no working, engineer and sapper pay will be issued to men engaged on or proceeding to or from such employment. These rules will also apply to work executed for the P. W. D. or Railway Department.

114. If during the progress of a work, further work, which was not allowed for in the estimate, is required, a supplementary estimate may be submitted; and if a sanctioned estimate is likely to be exceeded, a revised estimate should be submitted with a statement on I. A. F. W-1799 showing the causes of the anticipated excess. Supplementary or revised estimates.

115. When an excess on a work occurs so late as to render the submission of a revised estimate useless, the explanation of such excess, if over 5 per cent., will be given on the completion report (P. W. F. 45A); provided the outlay on the work has been recorded by sub-heads; otherwise the report of completion will be entered on P. W. F. 45E, showing the works completed during the month. Completion reports.

116. The office of final record for the completion report will be that of the authority who sanctioned the final fair estimate for work, except in the case of estimates sanctioned by the Secretary of State or G. of I, when the office of record will be that of the D. G. M. W. The completion report will be forwarded by the A. C. R. E. to the C. R. E. of the Divn. The latter will forward the completion report to the E. Accts. M. W., with direct to the office shown in the able items statement, or Audit Note.

In the case of works or repairs executed on requisition (I. A. F. W-1833), the certificate at the foot takes the place of the completion report.



Completion certificates.

117. On the completion of any work or repairs, a completion certificate on P. W. F. 45B. or, if the work was executed on a requisition, the requisition (I. A. F. W. 1833) should be forwarded to the officer concerned for signature.

Official note books.

118. Every officer and upper subordinate will keep a note book, which will be treated as an official record, and in which he will enter any orders he may have received and all matters of interest regarding works in progress.

#### Repairs.

Classification of repairs.

119. Repairs (or maintenance) includes all work, except as described in paras. 93 and 93-A, necessary to keep works in proper condition. They are classed as "periodical," i.e., those carried out at fixed intervals, as white-washing, painting, etc., with any items contingent on these; and "occasional," those which become necessary from time to time.

Periodical repairs.

120. The following are the principal periodical repairs:—

#### Half-yearly—

White-washing guard rooms and cells, and walls of barracks built of sun-dried brick or mud plastered.

White or colour-washing hospital wards, unless walls are treated with washable distemper or oil-paint.

\* Renewal of the earthen floors of latrines for British troops.

#### Annual—

Internal colour-washing of officers' quarters, the walls of which are of sun-dried brick or mud-plastered (but see Note 3).

White-washing barracks, latrines, all hospital buildings other than wards, and such other buildings as may require it.

Repairs to plaster and relaying tiles.

\* Renewal of earthen floors of the stables of British mounted corps and station veterinary hospitals.

Internal white-washing of quarters and barracks of Indian troops in charge of the M. W. S.

White-washing cook-houses, except those in regular use, which may, if necessary, be white-washed quarterly.

#### Biennial—

Internal colour-washing of the following buildings:—

Main rooms in officers' quarters, mess-houses, quarters for regimental warrant and non-commissioned officers and married rank and file, departmental officers, unattached list and I. S. M. D. warrant officers and non-commissioned officers, and departmental civilian employés, sergeants' messes, offices, institutes (except liquor bar portion), prayer rooms, and schools.

#### Triennial—

New coating on thatched roofs.

#### Quadrennial—

External scraping and colour-washing of buildings.

Painting of woodwork, ironwork, and furniture

Note 1.—Any building may be limewashed on sanitary grounds on the requisition of the medical or veterinary officer in charge.

Note 2.—The main rooms under "Biennial" include sitting, dining, bed, and dressing rooms, but not bath-rooms, pantries, sculleries, and such like rooms.

Note 3.—Quadrennial oil-painting may be substituted for annual colour-washing of sitting and dining rooms of officers' quarters, the walls of which are of sun-dried brick or mud-plastered.

Repairs estimate.

121. In order to arrive at the cost of maintenance of each class of works

\* The refuse earth from the floors of stables and latrines is to be removed outside cantonment limits.

the end of the financial year, but the repairs may be completed, the expenditure being treated as if against a fresh estimate for the current year, which will consist of the unspent balance brought forward on a revised abstract for sanction. Any taxes payable on public buildings will be included in the annual repairs estimate.

122. To facilitate the preparation of periodical repair estimates standard measurements of all buildings are maintained in G. Es. and A. C. R. Es' offices. A. C. R. Es. are responsible that standard measurement books exist for all lines and important buildings in their charge, that the books are corrected up to date and that all alterations are verified and initialled by an officer.

Standard  
measure-  
ments.

123. The repairs to metalled roads consist of:—

Road  
repairs.

(i) Collection of metal

(ii) Consolidation of metal, including renewal of berms.

(iii) Maintenance

(iv) Repairs to bridges and other buildings.

The renewal of metal should be so arranged that equal proportions should be done each year; the estimate should be accompanied by a road diagram showing the date on which each portion was last renewed and the quarry from whence the metal would be obtained. For unmetalled roads a maintenance estimate only is necessary.

124. The renewal and repair of stable floors of a permanent nature or of the earthen floors of the stables and outstandings of station veterinary hospitals, and the renewal of the earthen floors of the stables of British units and Indian cavalry regiments who are in occupation of lines in charge of the M. W. S. will be carried out by the M. W. S., and generally executed in dry weather. The repair of the earthen floors of stables, and the renewal and repair of the floors of outstandings of British units and Indian cavalry regiments, who are in occupation of lines in charge of the M. W. S., must be carried out regimentally. The special renewal of earthen floors of standings and the disinfection of stables after an outbreak of infectious or contagious disease will be carried out under the rules in A. R., I, Vol. II.

Repairs to  
stable  
floors.

125. Government wells in cantonments are cleaned and repaired by the M. W. S., and those on established district camping grounds under the orders of the local Government.

Repairs to  
wells.

The cost of cleaning wells at established district camping grounds forms a charge against Provincial funds.

#### Stores.

126. Stores must be counted at least once a year and a certificate to that effect given on the registers for the 30th September; all important stores must be counted by an officer.

Stock-  
taking.

127. The rules regarding stock apply equally to furniture.

Furniture.

128. All surplus stores not likely to be required for twelve months should be reported to the A. C. R. E. for disposal. Unserviceable stores should be entered at once on a survey report (P. W. F. 42D) for the orders of the A. C. R. E.

Stores,  
surplus and  
unservice-  
able.

**Appendix I.**  
**Authorized Scale of M. W. S. Establishment.**  
**1. Distribution of R. E. Officers and their charges.**

Division.	M. W. S. Branch.	Div. C. R. E.	A. C. R. E.	O. E.	Total.	Stations.	REMARKS.
Army H.Q. Qrs.	7*	...	...	...	7	.....	...
1st (Peshawar) Divn.	...	1	...	...	...	.....	Administrative officer, and Secy. P. W. D. to Chief Commissioner, N. W. F. Province.
	...	...	1	...	...	Peshawar, Cherat, Khyber and outposts.	
	...	...	1	...	...	Nowshera, Raisalpur, Maridan, Malakand, Chitral.	
Kohat Bde.	...	...	1	...	...	Kohat, Samana, Kurram.	Administered directly under the R. G. M. W. The M. W. S. has charge of Civil Work, also.
Bannu Bde.	...	...	1	...	...	Bannu, Tochi.	Ditto ditto.
Deraajat Bde.	...	...	1	...	...	Dera Ismail Khan, Tank, Jandola, Morfaza, Wana, Drasinda, Mogalkot.	Ditto ditto.
2nd (Rawal Pindi) Divn.	...	1	...	...	...	.....	Administrative officer.
	...	...	1	...	...	Rawal Pindi, Hassan Abul, Murree, Barian (Thobba), Kuldana, Gharial, Upper Topa, Lower Topa, Campbellpore, Attock, Jhelum, Sialkot.	
	...	...	1	...	...	Abbottabad, Baragali, Kalabagh, Khanpur, Ohara Daka, Changlagali, Khyragali.	
	...	1	...	...	...	.....	Administrative officer.
3rd (Lahore) Divn.	...	...	1	...	...	Ferozepore, Lahore Cantonment, Lahore Fort, Multan.	
	...	...	1	...	...	Jullundur, Amritsar, Bakloh, Dharmasala, Dalhousie	
	...	...	1	...	...	Ambala and Simla Hills.	
4th (Quetta) Divn.	...	1	...	...	...	.....	Administrative officer and Secy. P. W. D. to A. G. G., Baluchistan.
	...	...	1	...	...	Quetta Military and outposts.	
	...	...	1	...	...	Quetta Civil, Chaman, Mastung and outposts.	
	...	...	1	...	...	Loralai and outposts.	
5th (Mhow) Divn.	...	...	1	...	...	Karachi, Hyderabad (bind), Sukkur.	
	...	1	...	...	...	.....	Administrative officer.
	...	...	1	...	...	Mhow, Nasirabad, Neemuch, Ajmere, Khandwa.	
	...	...	1	...	...	Jubbulpore, Pachmarhi, Sangor, Kamptee, Nagpur (Sitabuldee).	
	...	...	1	...	...	Jhansi, Nowgong, Sebare.	

\* Includes Director-General, Deputy Director-General, 3 Assistant Directors-General, 2 Deputy Assistant Directors-General, and Inspector of Machinery.

## APPENDIX TO INDIA ARMY ORDERS, 1918.

### SECTION 12.

GOVERNMENT OF INDIA,

ARMY DEPARTMENT;

*Dated Simla, the 1st October 1918.*

THE following corrections to Army Regulations, India, Volume XII, are promulgated by direction of the Right Honourable the Governor General in Council :—

### CORRECTIONS.

Corrections to volumes contained in this Appendix are :—

Section	1.	A. R., I.,	Vol.	I.
"	2.	"	"	II.
"	3.	"	"	III.
"	4.	"	"	IV.
"	5.	"	"	V.
"	6.	"	"	VI.
"	7.	"	"	VII.
"	8.	"	"	VIII.
"	9.	"	"	IX.
"	10.	"	"	X.
"	11.	"	"	XI.
"	12.	"	"	XII.
"	13.	Regulations for the Discharge of British Soldiers serving in India.		
"	14.	Army Tables, Medical.		
"	15.	Batty. of R. H. A., Q. F. 13-pr. guns.		

Note 1.—Corrections affecting the "Selections from the Army Regulations, India, for the use of officers of Civil Departments of the Government of India" are denoted by two vertical black lines, one on either side of the correction.

Note 2.—Commencing with the April 1913 issue of the Appendix to India Army Orders the corrections to each book, or series of books, of Regulations, etc., are published in a separate section of the Appendix.

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"	7.	"	VII.
"	8.	"	VIII.
"	9.	"	IX.
"	10.	"	X.
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# Corrections--continued.

Section 16.	Army Tables, Batty. of R. F. A., Q. F. 18-pr. guns.
" 17.	Batty. of R. F. A., Q. F. 4.5-inch Howitzer, 1914 (P. L.).
" 18.	Batty. of R. G. A., B. L. 4-inch or 30-pr. guns.
" 19.	Batty. of R. G. A., B. L. 5-inch.
" 20.	Mountain Battery (British or Indian), B. L. 10-pr.
" 21.	Company of R. G. A.
" 22.	Ammunition Columns, Sections of R. H. A. and R. F. A. (Q. F. 13 and 18-pr.)
" 23.	British Cavalry.
" 24.	Indian Cavalry and Bodyguards.
" 25.	British Infantry.
" 26.	Indian Infantry.
" 27.	Fort Armaments.
" 28.	Engineer Units.
" 30.	Frontier Garrison Artillery.
" 31.	Transport.
" 32.	Miscellaneous Services.
" 32-A.	Miscellaneous Services, Part I.
" 33.	Regulations for Magazines in India, and Care and Preservation of War Matériel.
"	
"	
"	War Establish-
"	
" 38.	War Manuals (less Medical), and Tables of Books, Forms and Stationery.
" 39.	
" 40.	
"	ing (Military).
" 41.	Classification Handbook of Army Receipts and Charges.
" 42.	Standard Tables for calculating Field Forecast Estimates.
" 43.	India Army Form Z-2000.
" 44.	Manual of Indian Military Law.
" 45.	Instructions for the payment of British Troops serving in India.
" 46.	Selections from Army Regulations, India, for the use of Civil Officers of the Departments of the Government of India.
" 47.	Mobilization Store Tables for the Field Army.
" 48.	Instructions, I. T.
" 49.	Instructions, Staff.
" 50.	Mobilization Store Tables for Territorial R. F. A., B. L. 5-inch
"	
"	Territorial R. F. A., B. L. C. 15-pr.
"	
"	Indian Addendum.
" 53.	Army Tables, Ammunition Column, R. F. A., 4.5-inch Howitzer.
" 54.	Battery of Mountain Artillery (B. or I.), B. L. 2.75-inch guns.
" 55.	Battery Territorial R. F. A., Q. F. 18-pr. guns.
" 56.	Rules and Regulations, Indian Defence Force (Provisional).
" 57.	Army Tables, Machine Gun Company.
" 58.	Army Tables of a Divisional Signal Company, 1917. (Provisional.)
" 59.	Equipment and Mobilization Store Tables of a Garrison Battalion of British Infantry, 1918.



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 Corrections—continued.
 

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- Section 18. Army Tables, Batty. of R. G. A., B. L. 4-inch or 30-pr. guns.  
 " 19. " " Batty. of R. G. A., B. L. 5-inch.  
 " 20. " " Mountain Battery (British or Indian), B. L. 10-pr.  
 " 21. " " Company of R. G. A.  
 " 22. " " Ammunition Columns, Sections of R. H. A. and R. F. A.  
     (Q. F. 13 and 18-pr.)  
 " 23. " " British Cavalry.  
 " 24. " " Indian Cavalry and Bodyguards.  
 " 25. " " British Infantry.  
 " 26. " " Indian Infantry.  
 " 27. " " Fort Armaments.  
 " 28. " " Engineer Units.  
 " 30. " " Frontier Garrison Artillery.  
 " 31. " " Transport.  
 " 32. " " Miscellaneous Services.  
 " 32-A. " " Miscellaneous Services, Part I.  
 " 33. Regulations for Magazines in India, and Care and Preservation of  
     War Matériel.  
 " 34. Instructions for Armourers, India.  
 " 35. Price Vocabulary of Stores, Indian Addendum.  
 " 36. Field Service Regulations, Part II, Indian Supplement, War Establish-  
     ments, India: Mobilization Regulations, India.  
 " 37. Field Service Manuals (less Medical).  
 " 38. War Manuals (less Medical), and Tables of Books, Forms and  
     Stationery taken into the Field by the Army in India.  
 " 39. Training Manuals, including Musketry Regulations (but less Medical).  
 " 40. Field Service Manual (Medical), War Manual (Medical), Medical Train-  
     ing (Military).  
 " 41. Classification Handbook of Army Receipts and Charges.  
 " 42. Standard Tables for calculating Field Forecast Estimates.  
 " 43. India Army Form Z-2000.  
 " 44. Manual of Indian Military Law.  
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 " 47. Mobilization Store Tables for the Field Army.  
 " 48. Instructions, I. T.  
 " 49. Instructions, Staff.  
 " 50. Mobilization Store Tables, Battery Territorial R. F. A., B. L.  
     5-inch Howitzers, Indian Addendum.  
 " 51. Mobilization Store Tables, Battery Territorial R. F. A., B. L. C. 15-pr.  
     guns, Indian Addendum.  
 " 52. Mobilization Store Tables, Battalion Territorial British Infantry,  
     Indian Addendum.  
 " 53. Army Tables, Ammunition Column, R. F. A., 45-inch Howitzer.  
 " 54. " " Battery of Mountain Artillery (B. or I.), B. L.  
     2 75-inch guns.  
 " 55. " " Battery Territorial R. F. A., Q. F. 18-pr. guns.  
 " 56. Rules and Regulations for the Indian Defence Force (Provisional).  
 " 57. Army Tables, Machine Gun Company.  
 " 58. Army Tables of a Divisional Signal Company, 1917 (Provisional)  
 " 59. Equipment and Mobilization Store Tables of a Garrison Battalion of  
     British Infantry, 1918.  
 " 60. Army Tables M. L. 2-inch Trench Howitzer and 3-inch Stoke's Trench  
     Howitzer, India, 1918.



# TO INDIA ARMY ORDERS, 1919.

## SECTION 12.

GOVERNMENT OF INDIA,

ARMY DEPARTMENT;

*Dated Simla, the 1st October 1919.*

The following corrections to Army Regulations, India, **XII**, are promulgated by direction of the Right Hon. the Governor General in Council:—

### CORRECTIONS.

to volumes contained in this Appendix are:—

1.	A. R., L.	Vol. I.
2.	"	" II.
3.	"	" III.
4.	"	" IV.
5.	"	" V.
6.	"	" VI.
7.	"	" VII.
8.	"	" VIII.
9.	"	" IX.
10.	"	" X.
11.	"	" XI.
11-A.	Clothing Regulations, India, 1919 (Provisional).	
12.	A. R., L.	Vol. XII.
13.	Regulations for the Discharge of British Soldiers serving in India.	
14.	Army Tables, Medical.	
15.	"	Batty. of R. H. A., Q. F. 13-pr. guns.
16.	"	Batty. of R. F. A., Q. F. 18-pr. guns.
17.	"	Batty. of R. F. A., Q. F. 4.5-inch Howitzer, 1914 (P.I.)
18.	"	Batty. of R. G. A., B. L. 4-inch or 30-pr. guns.
19.	"	Batty. of R. G. A., B. L. 5-inch.

1.—Corrections affecting the "Selections from the Army Regulations, India, for the use of officers of Civil Departments of the Government of India" are denoted by two vertical black lines, one on either side of the correction.

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## Corrections—continued.

- Section 20. Army Tables, Mountain Battery (British or Indian), B. L. 10-pr.
- " 21. " " Company of R. G. A.
- " 13. " " Ammunition Columns, Sections of R. H. A. and R. F. A.  
(Q. F. 13 and 18-pr.)
- " 23. " " British Cavalry.
- " 24. " " Indian Cavalry and Bodyguards.
- " 25. " " British Infantry.
- " 26. " " Indian Infantry.
- " 27. " " Fort Armaments.
- " 28. " " Engineer Units.
- " 30. " " Frontier Garrison Artillery.
- " 31. " " Transport.
- " 32. " " Miscellaneous Services.
- " 32-A. " " Miscellaneous Services, Part I.
- " 33. Regulations for Magazines in India, and Care and Preservation of War Matériel.
- " 34. Instructions for Armourers, India.
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- " 36. Field Service Regulations, Part II, Indian Supplement, War Establishments, India: Mobilization Regulations, India.
- " 37. Field Service Manuals (less Medical).
- " 38. War Manuals (less Medical), and Tables of Books, Forms and Stationery taken into the Field by the Army in India.
- " 39. Training Manuals, including Musketry Regulations (but less Medical).
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- " 47. Mobilization Store Tables for the Field Army.
- " 48. Instructions, I. T.
- " 49. Instructions, Staff.
- " 50. Mobilization Store Tables, Battery Territorial R. F. A., B. L. 5-inch Howitzers, Indian Addendum.
- " 51. Mobilization Store Tables, Battery Territorial R. F. A., B. L. C. 15-pr. guns, Indian Addendum.
- " 52. Equipment and Mobilization Store Tables for a Battalion of British Infantry (Territorial Force), 1918.
- " 53. Army Tables, Ammunition Column, R. F. A., 4.5-inch Howitzer.
- " 54. " " Battery of Mountain Artillery (B. or I.). B. L. 2.75-inch guns.
- " 55. " " Battery Territorial R. F. A., Q. F. 18-pr. guns.
- " 56. Rules and Regulations for the Indian Defence Force (Provisional).
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- " 58. Army Tables of a Divisional Signal Company, 1917 (Provisional).
- " 59. Equipment and Mobilization Store Tables of a Garrison Battalion of British Infantry, 1918.
- " 60. Army Tables, M. L. 2-inch Trench Howitzer and 3-inch Stoke's Trench Howitzer, India, 1918.
- " 61. Army Tables for a Machine Gun Squadron, India, 1918.
- " 62. Army Tables for a Motor Machine Gun Battery, India, 1918.





M. W. S. Establishment.—Appx. I.

Division.	M.	Branch.	Dist. C.	R. F. A.	A. C. H. F. A.	G. F. A.	Total.	Stations.	REMARKS.
(Poona) Div.	...	1	...	...	...	...	...	...	Administrative officer.
	...	...	...	1	...	...	...	Poona, Kirkee, Belgaum.	
	...	...	...	1	...	...	...	Ahmednagar, Aurangabad.	
	...	...	...	1	...	...	...	Bombay, Deolali, Khandala.	
	...	1	...	...	...	...	...	.....	Administrative officer.
	...	...	...	1	...	...	...	Dehra Dun, Chakrata, Roorkee, Lansdowne, Kailana, Baharunpur, Landour.	

Appendix I, Table 1—Distribution of R. E. officers and their July Appx. On page 21 in column 7 opposite "7th (Meerut) Divn.," as 1. A O—1917. after "Bhim Tal" and insert it after "Benares" opposite "8th know) Divn." remove "Fatehgarh" 2717 M. W.

(Lucknow) Div.	...	...	1	...	...	...	...	Allahabad, Cawnpore, Benares.	Note—Sikkim and Shillong are administered by the local Governments concerned.
	...	...	1	...	...	...	...	Fort William, Alipore, Darjeeling, Dinapore.	
	...	...	1	...	...	...	...	Barrackpore, Dum-Dum, Ishapore, Coimbatore.	
	...	1	...	...	...	...	...	...	Administrative officer.
	...	...	1	...	...	...	...	Secunderabad and Bolaram.	
(Secunderabad) Divn.	...	...	1	...	...	...	...	Bangalore, Bellary	
	...	...	1	...	...	...	...	Madras, St Thomas' Mount, Wellington, Ootacamund, Lovedale, Coonoor, Cannanore, Calicut, Malaparam and Trichinopoly.	
Aden Bde.	...	...	1	1	2	...	...	Aden	Administered directly under the D. G. M. W. The M. W. S. have charge of civil works also.
Barma Divn.	...	...	...	1	1	...	...	Rangoon River Defences	Administered directly under the D. G. M. W. The other Military Works in Barma are administered by the local Government.
TOTAL	...	...	...	...	115	...	...	Officers	
Allowance for fuel, high, deputation, etc.	...	...	...	...	29	...	...		
AND TOTAL	...	...	...	...	144	...	...	Officers.	

## 2. Subordinate Establishments.

## Upper subordinates.

Grade.	Scale	Staff salary.	Consolidated salary.	Authority who appoints and promotes.	REMARKS.
Sub-engineers, 1st grade . . .	8	Rs 250	Rs. 400	D.G.M.W.	(a) Must hold sub-engineer's certificate from T.C.E. College, or possess "special and superior qualifications" before promotion to this grade.
" " 2nd " . . .	7	200	300	"	
" " 3rd " (a) . . .	14	150	250	"	
Supervisors, 1st " . . .	18	120	200	"	
" " 2nd " . . .	31	100	150	"	
Overseers, 1st grade . . .	76	85	100	"	

NOTE 1—Proportion of various grades to established scale—

## Barrack Department.

Class.	Scale.	Pay.	Authority who appoints or promotes.	REMARKS.
<i>Barrack Masters.</i>				
Commissionary . . .	1	Vol I.	D. G. M. W.	
Deputy Commissionary . . .	2		"	
Assistant Commissionary . . .	3		"	
Conductors . . .	12		"	
<i>Assistant Barrack Masters.</i>				
Sub-Conductors . . .	21	As in A. R. I.	"	
<i>Barrack Serjeants.</i>				
Staff Serjeants and Serjeants . . .	58	As in A. R. I.	"	

## Lower subordinates.

Grade.	PAY.				Authority who appoints.
	Scale.	Minimum.	Quinquennial increment.	Maximum.	
Sub-overseers, 1st grade . . .	67	{ 50 45*	10	{ 70 65*	D. G. M. W.
" " 2nd " . . .	71	{ 35 32*	5	{ 45 42*	C. R. E. of Divn.
" " 3rd " . . .	43	{ 30 28*	5	{ 35 33*	"
TOTAL . . .	181				

NOTE 1—The D. G. M. W. may sanction a small increase of pay to a deserving sub-overseer instead of promoting him.

NOTE 2—For special services and on special recommendation the D. G. M. W. may sanction an extra increment of Rs. 10 to a man who has been 15 years in the 1st grade and 20 years in the department, and a second extra increment of Rs. 10 after a further service of 5 years.

NOTE 3—The maximum average pay of all sub-overseers in the M. W. S. must not exceed Rs. 50.

TABLE I.

*Office establishment of the D. G. M. W.*

Post.	Authorised scale.	Pay	Authority who appoints or promotes.	REMARKS.
		Rs.		
Chief clerk . . . . .	1	600	D. G. M. W.	
Superintendent . . . . .	1	500		
" . . . . .	1	400		
1st Division				
Assistant . . . . .	1	350		
" . . . . .	1	300		
Assistants . . . . .	2	250		
" . . . . .	2	200		
" . . . . .	2	170		
" . . . . .	2	140		
2nd Division.				
Clerk . . . . .	1	200		
" . . . . .	1	180		
" . . . . .	1	160		
" . . . . .	1	120		
Clerks . . . . .	2	100		
" . . . . .	3	80		
" . . . . .	3	70		
" . . . . .	3	60		
" . . . . .	3	50		
" . . . . .	3	40		
Draughtsmen . . . . .	1	150		
" . . . . .	1	120		
" . . . . .	1	100		
" . . . . .	1	80		
Daffries . . . . .	3	10—24*		
Jemadar . . . . .	1	12—15		
Poons . . . . .	2	10		
" . . . . .	3	9		
" . . . . .	6	8		

\* Rising by biennial increments of Rs.

\* Rising by biennial increments of Rs.

TABLE II.

*Office establishment of the Divisional and District offices of the M. W. S.*

Post.	Authorised scale.	Pay.	Authority who appoints or promotes.	REMARKS.
		Rs.		
Clerks . . . . .	3	250	D. G. M. W.	
" . . . . .	4	200		
" . . . . .	5	150		
" . . . . .	10	125		
" . . . . .	18	100		
" . . . . .	20	80	C. R. E.	
" . . . . .	22	70		
" . . . . .	33	60		
" . . . . .	42	50		
" . . . . .	55	40		
" . . . . .	62	30		

TABLE II—contd.

Office establishment of the Divisional and District offices of the M. W. S.  
—contd.

Post.	Authorised scale.	Pay.	Authority who appoints or promotes.	REMARKS.
		Rs.		
Draughtsman . . . . .	1	120	D. G. M. W.	
Draughtsmen . . . . .	6	100	"	
" . . . . .	6	90	"	
" . . . . .	6	80	"	
" . . . . .	9	70	"	
" . . . . .	10	60	"	
" . . . . .	9	50	"	
" . . . . .	7	40	"	
Cashiers . . . . .	7	60	"	
" . . . . .	4	50	"	
" . . . . .	3	40	"	
" . . . . .	2	30	"	
Duffries . . . . .	6	10—2—20	C. R. E.	
Duffry . . . . .	1	12—15	"	
Duffries . . . . .	3	8—10	"	

*Petty establishment.*

Post.	Scale.	Pay.	Authority who appoints or promotes.	REMARKS.
		Rs.		
Storekeepers . . . . .	2	80	D. G. M. W.	} Must furnish adequate security deposit
" . . . . .	4	70	"	
" . . . . .	7	60	"	
" . . . . .	8	50	"	
" . . . . .	10	40	"	
" . . . . .	12	30	"	
Artificers (a) . . . . .	8	35—2—45	"	
" . . . . .	1	30—2—40	"	
" . . . . .	8	25—1—30	"	
Lascars . . . . .	2 (b)	6-5-4	C. R. E.	

(a) Present incumbents should not be replaced, except with the special sanction of the D. G. M. W., the intention being ordinarily to employ men temporarily as works' charge against the work for which they are engaged.  
(b) These appointments cease after present incumbents become non-effective.

TABLE III.

*Peon establishment of the M. W. S. in Divisions and Districts.*

Post	Scale	Pay.	Authority who appoints or promotes.	REMARKS.
		Rs.		
Peon . . . . .	1	20	C. R. E.	
Peons . . . . .	8	15	"	
" . . . . .	2	14	"	
" . . . . .	25	12	"	
Peon . . . . .	1	11	"	
Peons . . . . .	12	10	"	
" . . . . .	42	9	"	
" . . . . .	65	8	"	
" . . . . .	184	7	"	
" . . . . .	137	6	"	

NOTE.—1 appointment on Rs. 30, 1 on Rs. 14 and 2 on Rs. 12 in the 4th (Quetta) Division will be reduced, as soon as present incumbents vacate them, to 4 appointments in that Division on Rs. 10 and 7 on Rs. 9.

# Appendix II. Local allowances.

To which members of the M. W. S. are entitled.

	Presi- dency house- rent at Calcutta Madras, and Bombay.	Presi- dency allow- ance at Calcutta, Madras, and Bombay.	Lower Burma.	Upper Burma.	Balu- chistan and beyond the N.-W. Fron- tier.	Dar- jeel- ing.	Nilgiri Hills.	Bombay and Karachi	Ootacamund.	Pachmarhi.
	Rs.	Rs.	Rs.	Rs.	Rs.					Rs.
Officers . . .	As laid down in A. R. I., Vol. I									
Upper Subordi- nates.										
Sub-Engineers .	20	50	50	80	80	...	...			20(j)
Supervisors .	10	{ 50 30(d) }	50	60	60	25%(d)	25			20(f)
Overseers .	10	{ 50 15(a) }	40	40	40	25%(d)	20			20(f)
Lower Subordi- nates, etc.										
Sub-Overseers	...	20(b)	20	20	(e)(g) (A)	25%(d)	(s)	(e)		20(j)
Storekeepers .	...	...	...	...	(A)	...	(s)	(e)		
Clerks . . .	...	...	...	(e)	(e) (A)	...	(s)	(e)	(f)	5(j)
Cashiers . . .	...	...	...	...	(A)	...	(s)	(e)	...	
Draftsmen .	...	...	...	...	(A)	...	(s)	(e)	(f)	
Poons (perma- nent).	...	5(b)	...	...	...	...	50%	...		

## A. R., I., Vol. XII.

### Appendix II.—

Add the following new column :—

Loralai  
District.

In this column insert (k) against "Sub-overseers", "Storekeepers", "Clerks", "Cashiers" and "Draftsmen" and add as a footnote :—

"(k) Permanent employes of any of these classes when serving in the Loralai District are entitled to a local allowance at the rate of 50 per cent. on salary. "Baluchistan allowance is not admissible in addition to the Loralai allowance."

regard to the local circumstances.

(i) Sub-overseers, storekeepers, civilian clerks, cashiers, and draftsmen of the M. W. S. serving in the Wellington District receive 20 per cent. on salary, subject to a maximum of Rs. 40 and a minimum of Rs. 10 per month.

These allowances will be reduced by 20 per cent. in the case of those men who are provided with free quarters.

(j) This allowance will be reduced by 50 per cent. in the case of those men who are provided with free quarters.

Oct. Appx.  
I. A. O.—1919.  
Case No. 8199.  
(M. W. I.)

UNITS.	NUMBER OF QUARTERS TO BE BUILT.					
	Lieutenant-colonels	MAJORS.		Captains (single).	Lieutenants (single).	Junior married officers.
		Married.	Single.			
Royal garrison artillery— 8 companies with lieutenant-colonel, adjutant, instructor in gunnery, and inspector of ordnance machinery.	1	2	1	1	8	5
2 companies with lieutenant-colonel and inspector of ordnance machinery . . .	1	2	...	1	9	3
1 company . . .	...	1	...	...	2	1
British mountain batteries— 8 batteries . . .	1	2	1	3	6	4
2 " " " " " "	1	2	...	3	4	2
Indian mountain batteries— 4 batteries . . .	2	3	...	3	5	5
3 " " " " " "	1	3	...	1	4	3
2 " " " " " "	1	2	...	...	3	2
1 battery . . .	...	1	...	...	2	1
British infantry— 1 battalion . . .	1	2	1	3	8	5
Hd. qrs wing . . .	1	1	1	2	5	3
Detached wing . . .	...	1	1	1	4	2
Indian cavalry regiment . .	1	1	...	2	2	2
" infantry battalion . . .	1	1	...	2	2	2
Company of sappers and miners or company of submarine miners . . .	...	...	...	...	1	1
Officers of the staff R.A.M.C. I.M.S., or departments :— Lieutenant-colonels . . .	Full number }	...	...	...	...	...
Majors { 1 to 5 { 6 to 8 { 9 to 13 { 1 to 4	Full number }	Full number }	...	...	...	Full number
Captains { 5 to 8 { 9 to 13 { 1 to 3 { 4 to 7 { 8 to 12	Full number }	Full number }	...	...	...	Full number
Lieutenants { 1 to 3 { 4 to 7 { 8 to 12	Full number }	Full number }	...	...	...	Full number
	7					

Seals of  
quarters  
for depart-  
mental  
officers,  
warrant and  
N. C. Os  
Construc-  
tion of  
quarters for  
department-  
al officers,  
warrant and  
N. C. Os  
and civilian  
garreted and

6. Departmental officers with honorary rank, other than those of the I.S.M.D., Classification of

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W.  
given.

subordi-  
nates.

*Class B (detached).*—Commissionaries; deputy commissioners; senior assistant surgeons with the honorary rank of captain; and the following civilian gazetted and non-gazetted officers and subordinates of the ordnance department:—

Chemists of the cordite factory; chief mechanical engineers; civil chief master armourers; chief examiners of machine guns; chief foremen plumbers; chief foremen tanners; chief ordnance examiners; chemist of the gun and shell factory, Cossipore; and principal foremen of factories.

*Class B (semi-detached).*—Assistant commissioners; senior assistant surgeons with the honorary rank of lieutenant; head overseers of the ordnance department; and the following civilian ordnance gazetted and non-gazetted officers of the ordnance department:—

Carriage examiners; chemist and metallurgist; chief draftsman; chief foremen of fitters and turners; electricians ranking as foremen; foremen; master forgers; mechanical engineers; and ordnance examiners.

*Class C (semi-detached).*—Civilian mechanics, assistant foremen, and electricians ranking as assistant foremen, in the ordnance department.

*Class D (semi-detached).*—All U. L. and I.S.M.D. warrant officers; barrack masters, 1st class; and overseers and assistant overseers of the ordnance department.

*Class D (built in blocks).*—All U. L. non-commissioned officers; soldier mechanics; carnatic artificers employed in factories; cutter, H. and S. ... ordnance

ordnance department.

7. The provision and maintenance of ...

located in buildings which will be arranged for by the contingent allowances of the officers.

#### British Troops.

8. The establishments of all units are given in the Army Tables.

9. The authorized accommodation per man in dormitories is 90 sq. ft floor area and 140 sq. ft of floor area, 12½ to 14 sq. ft. of floor area, for two rows of beds only, and placed between adjoining doors, Establishments, Accommodation authorized in the plains.



exclusive of the space in the unoccupied inner verandahs on the other side of the barracks

Accommodation authorized in the hills.

10. The hill type of hut for single men should be 22 feet broad with a 6 ft. verandah in the clear in front. Each single man should be provided with 66 sq. ft. of floor area and 660 c. ft. of air space. Dining halls, with kitchens attached, are provided in separate buildings on the scale of 10 sq. ft. per man. The size of the buns will depend on the sites available, but they should be built to accommodate a whole, half or quarter company each. For married men the huts should be 24 ft. broad, and divided by partition walls into rooms of sizes authorised for each rank.

Fire places should be given in preference to stoves, and more windows than doors should be provided in the single men's huts, their size and position depending on the climate of the station.

In hill stations in Poona, Mhow and Quetta Divisions (except at Quetta

Double-storied barracks.

Sites for barracks in the hills.

12. The best sites are those on the summit levels. When a barrack is constructed on a terrace cut out in the hill side, care should be taken to cut off the

Band barracks.

Sergeants' quarters.

14. Quarters for single sergeants should be placed at the ends of single men's barracks. In the hills, a quarter should be attached to every hut in which the number of men exceeds 18, or to every two huts of 13 each. Whichever hut type is selected the verandah in front of the sergeant's quarter will be an open one.

Barrack store-rooms.

15. A small store-room about 10 ft. by 8 ft. should be given at the end of each company or half company barrack for the arms and kit of men in hospital, company stores, etc.

Scale of family quarters.

16 Family quarters will be provided on the following scale:—

In the R. A. for 56 per cent of the staff sergeants and sergeants, and 4 per cent of the rank and file.

In British cavalry for 40 per cent of the staff sergeants and sergeants and 3 per cent of the rank and file.

In British infantry for 35 per cent of the staff sergeants and sergeants

and 3 per cent of the rank and file.

Quarte

children. When provision has to be made for an uneven number of quarters, the odd quarter will consist of two rooms, each 16' x 13' and two rooms each 13' x 10' in the plains, and two rooms each 12' x 12' and two rooms each 13' x 11' in the Hills. This scale will also be provided for a detached quarter, but with a verandah on three sides only in the plains.

Design of family quarters.

17. For married quarters, single storied buildings should usually be provided, on well raised plinths, partition walls between quarters to be carried to the roof, covered passages should connect with the out-offices, but their sides should be left open; front verandahs to be 12 ft. wide, and end and back verandahs 10 ft. wide in the clear; where the verandahs are more than 2 ft. above the ground, railings should be given.

School master school mistress

Fire-pump  
Amenities

in the walls of barracks. Recesses with movable shelves, but without doors, should be provided in the walls of sitting and bed rooms in all quarters.

21. Iron suspension rods for lamps are to be provided in all barracks as lamp rods. Fixtures.

22. The provision of ceiling cloths in all warrant officers', sergeants', and married men's quarters, may be sanctioned by the Divl. Comdr. where considered absolutely necessary.

23. Cook-houses are to be attached to the dining halls. One large cook-house will be built between two company dining halls, but separate Warren's ranges will be provided for each company. The floors should be stone-paved, having a slope into a drain to facilitate washing the floor, this drain should discharge into a receptacle outside the building, sunk as little as possible below the ground. The sink receptacle should also be outside the building and above ground level. Self-closing doors with panels of wire gauze should be provided for all doorways, and wire gauze fixed in the windows in place of glass, if desired by the local authorities. The words "chopping block for firewood" should be painted on the wall over that article.

24. Each family quarters is to have a separate kitchen. For semi-detached houses, the kitchen should be built at the ends of the block, the cook-houses raised on a raised metal path place of chulas. In

the hills the cook-houses may be placed in either of the three positions shown in type-plan No. 10—Hutted Camps, and are to be provided with stores.

25. The floors are to be paved or flagged and laid with a slope of 1 in 16 from the wall to a central drain, which will carry away the water (see para. 26). Gratings are to be supplied in private ablution rooms. In old barracks having a drain down the centre of the stone floor of the lavatory, or under the place where the men have to stand in front of the basin stands, gratings may be supplied to cover the drain. Gratings are classed as furniture, and basin stands as fixtures. The private bath-rooms are to have doors with fastenings, and pegs to hang clothes on. The height of lavatories is to be 9 ft. in case of a pent roof and 12 ft. if the roof is flat.

26. For the removal of waste water from wash-basins etc. a small drain is to be provided.

(i) and a small main dry drain beyond the precincts of the barracks, with earthen drains

in small main dry drain beyond the precincts of the barracks, with earthen drains

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in small main dry drain beyond the precincts of the barracks, with earthen drains

Cook-houses for married men.

Latrines.

Seats of latrines for married sergeants and married rank and file, privies.

Out-houses in the hills.

Orderly room and offices.

Quarter guard.

- Detention rooms.** 31. The distance between the iron bars of doors and windows in detention rooms should not exceed 5 inches.
- Rear guards.** 35. Rear guards will not be given, except in certain localities, and under the special sanction of the G. of I.
- Serjeants' mess.** 36. The serjeants' mess should be in a central position, and, in the case of small bodies of men, may be under the same roof as the staff serjeants' quarters. Planked ceilings may be given under the sanction of the Divl. Comdr.
- Institutes.** 37. In the case of barracks with double verandahs, the inner verandah space will usually be reckoned as part of the authorised area for the institute. The scale of institutes for the hills is the same as that allowed for the plains, but, if the site is limited, may be reduced to not less than three-fourths of the scale. If the hut type is used, the hospital pattern of hut with a broad verandah in front and rear is most suitable (see T. P. 2 hutted camps), but the verandahs should, as a rule, be enclosed. Enclosed verandah space will be included in the floor area allowed. The hut type need not, however, be rigidly adhered to, see paragraph 10. For reading or games rooms, etc., open verandah space is not required.
- Corporal's Room.** 38. In the case of barracks with double verandahs, the inner verandah space will usually be reckoned as part of the authorised area for the institute.
- Theatre.** 39. In the case of barracks with double verandahs, the inner verandah space will usually be reckoned as part of the authorised area for the institute.
40. In the hills an open verandah for the privates' room of the liquor bar is required.
41. In the case of barracks with double verandahs, the inner verandah space will usually be reckoned as part of the authorised area for the institute.
42. Ration sheds for British troops require the previous approval of the C-in-C.
43. Stables are to be light structures with iron or masonry pillars, the iron being sheathed in wood to a height of 5 ft. 6 inches above the ground. The height of the eaves must not be less than 7 ft. 6 inches. The area allowed per horse is 14 ft. by 8 ft., with a central passage 5 ft. wide between the rows of horses; two iron picketting pegs with rings in the heads, firmly fixed, and a saddle rack and harness peg, will be provided for each horse. Water troughs and

3. The necessary wooden upper structure, including two cross beams for drop scenes.

as fencing, band practice dard. But if the site is limited, the scale. If the hut type is used, the roof over the stage portion of the theatre should be raised to 15 feet.

- Canteen.** 40. In the hills an open verandah for the privates' room of the liquor bar is required.
- Schools.** 41. In the case of barracks with double verandahs, the inner verandah space will usually be reckoned as part of the authorised area for the institute.

The water rooms should be equipped with (i) water taps, or a tank in case where a pipe water supply has not been installed, and (ii) basins (as fixtures) on the following scales:—

*Class room for men.*

With 16 to 32 seats	1 basin
With 33 to 64 seats	2 basins.
With 65 seats and over	3 basins.

*Class room for children.*

With 20 to 40 seats	1 basin.
With 41 seats and over	2 basins.

- Ration sheds.** 42. Ration sheds for British troops require the previous approval of the C-in-C.
- Stables.** 43. Stables are to be light structures with iron or masonry pillars, the iron being sheathed in wood to a height of 5 ft. 6 inches above the ground. The height of the eaves must not be less than 7 ft. 6 inches. The area allowed per horse is 14 ft. by 8 ft., with a central passage 5 ft. wide between the rows of horses; two iron picketting pegs with rings in the heads, firmly fixed, and a saddle rack and harness peg, will be provided for each horse. Water troughs and

mangers in stables are unnecessary. The outstanding of stables of corps will not be constructed by the State.

44. The forge is to be centrally situated as regards the stables; the forge room Forge should be paved with hard bricks or stone slabs; the aboeing shed, with blocks of wood, placed grain on end and saturated with local tar. Bonnets and flues for carrying off the smoke to be given. Anvil blocks are supplied as fixtures by the M. W. S.

45. The bench should be fixed at the north and the forge at the south end of Armourers shop

of the manege will be riding  
manege each, a rec- schools.  
by reason of group-  
the manege will be

circular.

Hide range,

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gets

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not

Wells.

l be

near Cricket  
ands grounds.

52. A general barrack department store is usually provided in a central posi- Furniture store.

tion for each station, and separate furniture stores are not therefore neces- sary.

When detached stores are given,

y regiment 1,275 sq. ft.; for a  
500 sq. ft. Detach. ind-

53. Separate accommodation for the storage of kerosine oil is authorized at Oil store.  
stations where the barracks are constructed of wood, and where there are no S. and  
T. or other suitable buildings in which it can be stored.

54. The accommodation for which accommodation is to be provided is Sanitaria.



separate ward. As a rule attendants' rooms should be placed between the main wards and the small ones for special cases, and an attendant's room should invariably be given next to the lunatics' ward. One small ward will be fitted with gated doors and windows as a ward for soldiers under detention. At stations for which lady nurses are authorized, a small ward, with bathroom attached, should be provided for their convenience whilst on duty. Hospital attendants should be provided with quarters near the hospital on the following scale:—

Hospital under	100 beds—	as if
"	100 to 125	" for 10 attendants.
"	125 to 150	" " 12
"	151 to 250	" " 14
"	251 and upwards	" " 16

A dormitory and detached dining hall (with kitchen) of authorised sizes (see paragraphs 9 and 10) should be given, the former being divided into two rooms so as to give separate accommodation for men on night duty.

61. An attendant's duty room should be provided in each hospital block on the following scale:—

For block containing up to 20 beds	16' x 20'
For block containing over 20 beds	as follows:—
62. The authorised accommodation	and 2 beds in 1 lying-in-ward. Family hospitals.
For 100 to 250	2 " 1 "
" 251 to 500	2 " 1 "
" 501 to 750	4 " 2 "
" 751 to 1000	4 " 2 "
" 1001 to 1500	6 " 3 "

allowing 50 per cent. extra on the above scale.

In small stations, where there are very few women and children, it will not be necessary to provide a separate family hospital; if necessary, a ward in the men's unit may be set aside for this purpose.

63. The provision of hospitals for men are generally applicable

one matron only should be provided in every family

the ward; extra spaces with no pro-

measured and the wall spaces where fuel is

(series). the Cupboards, shelves and lights.

one or two compartments at the end of one of the wards etc. Fanlights are to be given over the doors of wards.

65. Special accommodation for officers has been sanctioned as laid down in Army Tables, Medical. No scale has been fixed, but two officers a ward about 15' x 24', and for three to four officers a ward about 28' x 24'.

66. Stations are built as part of and 2nd. XXI.

67. Separate hospitals for contagious diseases.

Hospital for contagious diseases.

Wire gauze doors and windows

Departmental followers' latrines

Aden Bde., Mhow, Quetta and Poona Divns.—Aden, Karachi, Mhow, Nsemuch, Poona, Quetta.  
Secunderabad Division—Bangalore, Hoosur, Secunderabad.  
Burma Division—Bhamo, Mandalay, Meiktila, Rangoon, Shwabo.

Indian Troops.

Establishments. Authorised accommodation for combatants.

70. The establishments of all units are given in the Army Tables.

71. The authorised accommodation per man in living rooms is:—

	IN THE PLAINS		IN THE HILLS.	
	Floor area.	Cubic space.	Floor area	Cubic space.
(i) Indian cavalry.				
Risaldar Major, Risaldars and Ressaldars	403	5,508	403	3,672
Jemadars	300	4,050	300	2,700
Married sowars and married N. C. Os.	150	2,025	100	1,200
Single N. C. Os. and single sowars	60	810	50	600
(ii) Other units.				
Indian officers	300	4,050	300	2,700
Married N. C. Os and married soldiers	144	1,944	100	1,200
Single N. C. Os	111	1,499	80	960
Single soldiers	60	810	50	600

Authorised accommodation for followers, Intermediate scale

72. The authorised public followers are entitled to accommodation as allowed for married followers

Buildings for sappers and miners.

73. At stations of intermediate altitude, *e.g.* Quetta, Abbottabad, etc., accommodation should be provided on a scale intermediate between the scale for the plains and for the hills.

Punkah coolies' shelters

74. The construction and maintenance of all buildings required by sappers and miners for their professional duties, such as stores, instructional schools, workshops, etc., devolves upon the M. W. S. or P. W. D., but all additional buildings leading to future increased cost of maintenance require the sanction of the G. of I.

Religious teachers and schoolmasters' quarters

75. Inexpensive shelters should be made for punkah coolies, where they have to work in exposed positions.

Latrines.

75-A. Religious teachers and schoolmasters should be provided with quarters on the same scale as married combatants.

75-B. For regulations for construction and repair of latrines, see A. R. I., Vol. II, para. 433.

Miscellaneous.

Encamping grounds.

76. Encamping grounds are provided along frequented routes, the cost of land being debitable to the military estimates and other charges to M. W. funds; they should be maintained by the M. W. S. or P. W. D. as may be most convenient in each case. A covered-in well, with a masonry watering trough for animals, must be provided, and *Bardarkh-khanas* will also be necessary when there is no town or large bazar in the vicinity. A portion of the ground 30' x 30' should be reserved as a cemetery but not enclosed until required.

Danger buildings.

Mobilisation  
equipment.

Trees.

not be so placed as to intercept the prevailing wind. Lines of trees should not be less than 50 yards from the barracks and a second row may be planted at not less than 30 feet from the first. The cost of planting and maintaining trees is to be met from permanent funds but the work should be carried out in com-

*Appendix F, para. 80.*—Expunge the word "only" which occurs in the first line of the first clause, and add at the end of the same *Oct. Appr. I. A. O.—1919.*  
clause "*vide also A. R., I., Volume II.*"

Case No. 11414,  
(M. W. 5.)

authorised as a charge against the Military Works grant.

to the crema-  
Jhansi  
Jubbulpore  
Mhow  
Nasruch  
Flagstaffs

1 per arsenal

fixtures Arm racks,  
in troops

by the Farms.

supplies which will be maintained by farm agency, except pipe water

Dairies and offices

Store-godowns

European subordinates' quarters.

Water supply, including pukka wells.

Metalled roads.

If buildings other than those specified above are to be constructed by the M. W. S. or P. W. D., funds will be transferred from army estimates for the purpose.

Item No	Buildings.	Length.	Breadth.	Height.	Floor area, approximate.	Remarks.	Type plan and areas.
		Ft	Ft.	Ft	Sq Ft.		
	OFFICERS' QUARTERS.						
1	LIEUTENANT-COLONEL'S QUARTERS (i) <i>In the plains.</i> House, consisting of— 2 sitting-rooms, each Hall 2 bed-rooms, each 2 ditto (a) Cook-house, etc. Block containing— Kitchen Store-room Lamp-room Store-room	24 8 18 16 13 12 6 6	16 16 16 15½ 8 8 8 8	16 16 16 16 9 9 9 9	5,453 855	A porch 15' x 15' (225 sq ft) in front and 10' verandah in the clear all round, containing 2 dressing-rooms each 15' x 6½', a pantry 12' x 8½', and 6 bath-rooms 7' x 8½' or 6' x 8½'. The authorised area of the rooms under the main roof is 1,840 sq ft.  A verandah 7½' wide along the front with a fuel store 6' x 6' in it connecting by a covered passage 24 x 6' with the pantry (150 sq. ft.)	



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
1	LIEUTENANT-COLONEL'S QUARTER— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(f) Servants' quarters—12, each	12	10	9	1,892		
	(g) Coach-house and stables—						
	Coach-house . . .	14	10	9	}	To hold 2 vehicles. One for each authorized charger and two spare. See para. 2.	
	Stalls, each . . .	8	12	9			
	(i) <i>In the halls.</i>						
	Double-storied house—						
	2 sitting-rooms, each .	17	16	13	}	The area of the rooms under the main roof is 1,520 sq. ft.	
	Hall and staircase .	18	8	13			
	Bed-room . . .	17	14	13	}	The single-storied part includes a porch, 10' x 10', a 6' verandah in front, 2 bay windows, and a covered passage 36' x 6' to the cook-house. On the upper floor there is a sweeper's passage and staircase 87' x 3'.	
	Bath and store-rooms, each . . .	9	4½	13			
	Pantry . . .	9	5½	13	D. S. part		
	2 bed-rooms, each . .	18	16	11			
	1 ditto . . .	11	15	11	1,795		
	Dressing-room . . .	10½	7½	11	88		
	Ditto . . .	11½	9½	11	S S part		
	2 bath-rooms, each .	6½	7½	11		655	
	1 ditto . . .	5½	9½	11			
	1 ditto . . .	5½	6	11			
	1 ditto . . .	4	7	11			
	(a) Cook-house, etc.—						
	Block containing—						
	Kitchen . . .	12	10	8	}	367	
	Fuel store . . .	6	10	8			
	Lamp room . . .	6	6	8			
	(f) Servants' quarters—						
	2 Blocks, each of 6 quarters, each . . .	10	8	8	...		
	(g) Stalls 2, each . .	6	10	9	279	With a 4' passage in front. See para. 2.	
2	MAJOR'S QUARTER.						
	(i) <i>Married man, in the plains.</i>						
	2 sitting-rooms, each .	18	20	16	}	A porch 15' x 15' (292 sq. ft.) in front and a verandah 10' in the clear all round, containing 1 dressing-room 18' x 8½', and 1 dressing-room 13' x 8½', a pantry 10' x 8½', 2 bath-rooms 8½' x 8½', one 8' x 8½' and one 6' x 8½'. The authorized area of rooms under the main roof is 1,512 sq. ft. A verandah 6' wide in front, with a fuel store 4½' x 4½' in it, connecting by a covered passage 15' x 6' with the pantry (97 sq. ft.)	
	Hall . . .	8	20	16			
	Bed-room . . .	16	18	16	}	4,412	
	Ditto . . .	15	18	16			
	Ditto . . .	13	18	16			
	(a) Cook-house, etc.—						
	Kitchen . . .	13	8	9	}	586	
	Lamp-room . . .	6	8	9			
	Store . . .	8	8	9			
	(f) Servants' quarters—						
	8, each . . .	12	1	9	1,268		
	(g) Coach-house and stable—						
	Coach-house . . .	14	10	9	}	To hold 2 vehicles. One for each authorized charger and one spare. See para. 2.	
	Stalls, each . . .	8	12	9			
	(i) <i>Single man, in the plains.</i>						
	Sitting-room . . .	18	16	16	}	Verandah 10' on 2 sides and 6' on 2 sides with 1 store and 1 bath-room, each 8½' x 8', and 1 store and 1 bath-room, each 6½' x 7'. The authorized area of rooms under the main roof is 1,120 sq. ft.	
	Ditto . . .	24	12	16			
	Bed-room . . .	20	18	16	}	3,524	
	Dressing-room . . .	12	20	16			
	(a) Cook-house—						
	Kitchen . . .	8	10	9	143		
	(b) Latrine for officers (1 seat) . . .	4	8	...	40	One between 2 officers (single).	

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area approximate	Remarks	Type plan and sections.
2	MAJOR'S QUARTER— <i>contd.</i>	Ft.	Pt.	Ft.	Sq. Ft.		
	(u) <i>Single man, in the plains—contd.</i>						
	(f) Servants' quarters— 6, each	12	10	9	956		
	(g) Coach-house and stables	as	in	(i)			
	(iii) <i>Married man, in the hills.</i>						
	Double-storied house—						
	Drawing-room	16	14	12	D S. part 1,141. S S. part 470.	6' verandah on 2 sides with a porch at the corner. Hall 12' x 12' and staircase in front partly in the verandah. The single-storied part also includes a covered passage 12' x 4' leading to the kitchen from the pantry. The authorized area of rooms under the main roof is 1,080 sq ft	
	Dining-room	14	14	12			
	Bed-room	12	10	12			
	Bath-room	10	8	12			
	Pantry	7½	6	12			
	Store-room	6	6	12			
	Bed-room	16	14	10			
	Ditto	14	14	10			
	Dressing-room	12	10	10			
	Ditto	7½	6	10			
	Bath-room	6	10	10			
	Ditto	6	6	10			
	(a) Cook-house—						
	Kitchen	10	8	9	310	With a verandah 4' wide in front.	
	Fuel store	5	8	9			
	(f) Servants' quarters— 8, each	10	8	8	...	With a 4' passage in front.	
	(g) Stables 3, stalls each	6	10	9	279		
	(iv) <i>Single man, in the hills</i>						
	Detached or semi-detached—						
	Sitting-room	16	16	12	1,536	The authorized area of rooms under the main roof is 620 sq. ft. 7½' verandah on 3 sides containing 2 bath-rooms 6' x 8' and a store-room 6' x 9', a porch 5' x 3' outside the back room.	
	Bed-room	16	14	12			
	Dressing-room	14	10	12			
	(a) Cook-house	6	8	9	109		
	(b) Officers' latrine	as in	(ii)	(b)			
	(f) Servants' quarters— 6 each	10	8	8	...	With a 4' passage in front.	
	(g) Stable, 1 stall	6	10	9	171		
3	CAPTAIN'S QUARTER						
	(i) <i>Married man, in the plains.</i>						
	Block containing—						
	2 sitting-rooms, each	20	16	16	3,899	An 8½' verandah all round containing 2 dressing-rooms, 7' x 12', a pantry, 9½' x 8', 2 bath-rooms, and a store-room, each 7' x 7', 2 bath-rooms each 5½' x 7'. The authorized area of rooms under the main roof is 1,440 sq ft.	
	Hall	6	16	16			
	Bed-room	18	16	16			
	2 ditto, each	16	16	16			
	(a) Cook-house, as for a major	see	2(s)	(a)	586		
	(f) Servants' quarters, as for a single major.	see	2	(ii)	679		
	(g) Coach-house and stables—						
	Coach-house	14	10	9	...	To hold two vehicles One for each authorised charger, and one spare, with a minimum of two stalls. See para 2	
	Stalls, each	8	12	9	...		
	(ii) <i>Single man, in the plains</i>						
	Semi-detached block containing 2 quarters—						
	2 sitting rooms, each	20	18	16	...	The authorized area of rooms under the main roof is 618 sq ft. per captain. 10' verandah all round with 2 bath-rooms, 8' x 8½' and 2 store-rooms, 12' x 8½' in it.	
	2 bed-rooms, each	18	16	16	..		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
3	CAPTAIN'S QUARTER— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(ii) <i>Single man, in the plains—contd.</i>						
	Or 1 room . . . . .	21	16	16	...	10' verandah all round with 1 bath-room 8' × 8½' and 1 store-room 12' × 8½'—see para. 1.	
	(a) Cook-house, as for a single major.	see	2	(ii)	(a) 143.	One between 2 officers.	
	(b) Officers' latrine . . .	see	2	(ii)	(b)	8 quarters between 2 officers.	
	(f) Servant's quarters, same as for a married major	see	2	(i)	(f)		
	(g) Coach-houses and stables—						
	2 coach-houses, each	14	10	9		One for each officer.	
	2 stalls, each . . .	8	12	9		One for each authorized charger and one spare for each officer. See para. 2.	
	(iii) <i>Married man, in the hills.</i>					The authorized floor area of main rooms is 766 sq. ft.	
	Drawing-room . . . . .	15	14	12	1,950	A porch, 10' × 6' at one corner and a 6' verandah on 3 sides containing a dressing room 6' × 9', pantry, bath, and store-rooms, each 6' × 6' and 2 bath-rooms, at the back 8' × 6' and 6' × 6'.	
	Dining-room . . . . .	14	12	12			
	Bed-room . . . . .	15	14	12			
	Ditto . . . . .	14	12	12			
	(a) Cook-house, etc.—						
	Kitchen . . . . .	10	8	9	310	With a 4' verandah in front and a covered passage, 12' × 4' leading to the pantry.	
	Fuel store . . . . .	5	8	9			
	(f) Servants' quarters, 4 each	10	8	8	456		
	(g) Stable, 1 stall . . .	6	10	9	160	With a 4' passage in front	
	(iv) <i>Single man, in the hills</i>						
	Block of 2 quarters—						
	2 sitting rooms, each .	14	14	12	1,930	A 6½' verandah all round containing 2 store or office rooms 10' × 8', and 2 bath-rooms 8' × 6' each.	
	2 bed-rooms, each . .	14	10	12			
	(a) Cook-house, as for a single major . . . . .	see 2	(ii)	(a)	109	One between 2 officers	
	(b) Officers' latrine (1 seat) . . . . .	see 2	(ii)	(b)	40	One seat for 2 single officers.	
	(f) Servants' quarters—8 each . . . . .	10	8	8	...	Four quarters for each officer.	
	(g) Stables, 2 stalls, each	6	10	9	279	With 4' passage in front.	
4	LIEUTENANT'S QUARTERS						
	(i) <i>Married man, in the plains.</i>						
	Same as for a married captain in the plains	see	3'	(i)			
	(ii) <i>Single man, in the plains.</i>						
	Block of 4 quarters—						
	4 sitting-rooms, each .	21	16	16	5,448	The authorized area of rooms under the main roof is 430 sq. ft.; an 8' verandah all round the block with 4 store-rooms, 8½' × 6½' in it.	
	4 dressing-rooms, each	14	11	16			
	4 bath-rooms, each . .	6	11	16			
	Central passage . . . .	43½	4	16		10' verandah all round with 1 bath-room 8' × 8½' and 1 store-room 12' × 8½'—see para. 1.	
	or 1 room . . . . .	21	16	16	...		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
4	LIEUTENANT'S QUARTERS —contd	Ft	Ft	Ft	Sq. Ft		
	(ii) <i>Single man, in the plains</i> —contd						
	(a) Cook-house— As for a single major	see	2(11)	(a)	143	Between 4 officers	
	(b) Officers' latrine (2 seats)	4	6		60	Ditto	
	(f) Servants' quarters— 16, each	12	10	9	2,517	Four quarters for each officer.	
	(g) Coach-house and stables— 2 coach-houses, each Stalls, each	14 8	10 12	9 9	... ...	1 for 2 officers One for each authorized charger and one spare for each officer See para 2.	
	(iii) <i>Married man, in the hills</i> Same as for a married captain in the hills.	see	3	(iii)			
	(iv) <i>Single man, in the hills.</i> Block of 4 quarters— 4 sitting-rooms, each 4 bed-rooms, each 2 store-rooms (in centre)	14 11 11	14 9 4	12 12 12	3,220	The authorized area of rooms under the main roof is 332 sq ft. An 8' verandah in front and at ends with 2 store-rooms each 6' x 7' and 2 bath-rooms each 6' x 7' in it, and 2 bath-rooms at the back of the middle quarters, each 6' x 7'.	
	(a) Cook-house— As for a major	see	2(11)	(a)	109	One between 4 officers.	
	(f) Servants' quarters— 12, each	10	8	9		3 quarters for each officer.	
	(g) Stables, 1 stalls, each	6	10	9	495	With 4' passage in front.	
6	UNIT SYSTEM						
	(i) <i>Double-storied block of 8 units</i> Containing 4 units, each— 1 room Ditto Bath and store-rooms in verandah, each And 4 units, each— 1 room Dressing, bath-room, and verandah	24 18 12 24 18	18 12 10 18 10	. . . . . . . . .	6,810	No field officer is entitled to more than 3 units or any other officer to more than 2 units unless there are spare units available. No officer is obliged to occupy more than 1 unit Verandah 10' wide all round, and a main staircase in the centre of the block 18' x 10'.	26-offi- cers' quarters
	(ii) <i>Single-storied block</i> Containing 2 units each— 1 room Ditto Bath and store-rooms in verandah, each And 2 units, each— 1 room Ditto Bath-room in verandah (a) Cook-house (f) Servants' quarters— 5 each { hills { plains (g) Stables, each	24 18 12 24 20 14 12 10 12 12 12	18 12 10 18 10 12 12 8 10 8 8 9	. .	6,810	The single-storied design is preferable subject to local conditions. Verandah 10' wide, all round For every 4 units. For each unit. 1 for each unit, and 1 extra for each charger and an officer is bound to maintain. One for each block of 4 units	26 offi- cers' quarters.
	(A) Coach-house— (To hold 2 conveyances)	24	12	12	130		

# Appx. V.—Accommodation—General.

Item No	Buildings	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type place and series.
6	OFFICERS' MESS-HOUSES.	Ft.	Ft.	Ft.	Sq Ft		
	(i) <i>For a battery, R A in the plains</i>						
	Mess-room . . . . .	30	20	21	3,530	10' verandah all round with pantry, bearer's room and store-room in it.	46-officers' quarters modified
	Ante-room . . . . .	20	18	21			
	Mess-serjeant's quarters as in item 21 (i) . . . . .	...	...	...	...	6' verandah round 3 sides with a bathroom in it.	
	(z) Cook-house—	as	in	item	6-A		
	(b) Officers' latrine—						
	Privy of 2 seats . . . . .	8	8	10	130		
	(f) Servants' quarters—	as	in	item	6-B		
	(i) Store-room . . . . .	10	10	10			
	(g) Enclosure wall or fence . . . . .	as	required				
	(ii) <i>For a battery, R A., in the hills, or in hutted camps—</i>						
	Mess-room . . . . .	20	18	10	1,680	With 9' verandah in front	5-butted camp
	Ante-room . . . . .	20	18	10			
	Dressing-room . . . . .	12½	10	10			
	Bath-room . . . . .	6	10	10			
	Bearer's room . . . . .	10	10	10			
	Mess serjeant's quarters—						
	1 room* . . . . .	20	12	10	1,010	9' verandah in front which contains the pantry. Bath-room 7½' x 6' at back.	Do.
	Pantry . . . . .	7½	12	9			
	Mess-store . . . . .	13½	12	10			
	Lamp-room . . . . .	5½	12	10			
	(a) Cook-house . . . . .	as	in	item	6-A		
	(b) Officer's latrine . . . . .	as	in	(c)(d)	130		
	(f) Servants' quarters . . . . .	as	in	item	6 B		
	(iii) <i>2 batteries, R A., or an Indian cavalry or Indian infantry regiment in the plains—</i>						
	Mess-room . . . . .	30	20	21	4,890	Verandah 10' (in the clear) all round, with a dressing-room 10 x 10', bearer's room 10' x 10', store-room 23' x 10', and pantry 23' x 10', in it	46 officers' quarters
	Ante-room . . . . .	24	18	21			
	Billiard-room . . . . .	24	18	21		Not provided in mess-houses of Indian units	
	Mess serjeant's quarters, as in item 21 (i) . . . . .	...	...	...	...		
	(a) Cook-house . . . . .	as	in	item	6-A		
	(b) Officer's latrine . . . . .	as	in	(f)	(b) 130		
	(f) Servants' quarters . . . . .	as	in	item	6-B		
	(g) Enclosure wall or fence . . . . .	as	required.	*			
	(iv) <i>2 batteries, R A., or a detached wing B. I., or an Indian cavalry or Indian infantry regiment in the hills or in hutted camps—</i>						
	Mess-room . . . . .	24	20	10	2,780	9' verandah in front and for half the back of the building, with a lavatory 13½' x 7½', and a store-room 7½' x 5' in it.	5-butted camp
	Ante-room . . . . .	20	18	10			
	Billiard-room . . . . .	27	20	10			
	Bearer's room . . . . .	10	10	10			

\* This room may be divided into two, if required

Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
6	OFFICERS' MESS-HOUSES— <i>contd.</i>						
	(iv) 2 batteries R. A., of a detached wing B. I., or an Indian cavalry or Indian infantry regiment in the hills or in huttid camps— <i>contd.</i>						
	Mess sergeant's quarters—						
	1 room* . . . . .	20	12	10	1,090	Not provided in mess-houses of Indian units	5-huttid camp.
	Pantry . . . . .	10½	12	10			
	Store-room . . . . .	8	12	10			
	(a) Cook-house . . . . .	as	in	item	6-A	9' verandah in front. Lamp and bath-rooms at back, each 7½' x 6'.	
	(b) Officer's latrine . . . . .	as	in	(i) (b)	130		
	(f) Servants' quarters . . . . .	as	in	item	6-B		
	(i) Store-rooms—3 rooms, each . . . . .	15	10	8	...		
	(v) 3 batteries, R. A., in the plains—						
	Mess-room . . . . .	45	22	21	6,553	For R. A. brigade head-quarters add 10' to the length of the mess-room and for each extra battery add 15' to the length of the mess-room.	49-off. cers' quarter modified.
	Ante-room . . . . .	30	22	21			
	Billiard-room . . . . .	30	22	21			
	Mess sergeant's quarter as in item 21 (v) . . . . .	as	in	item	6-A	Verandah 10' wide in the clear all round with a dressing room 10' x 10', bearer's room 10' x 10', store-room 23' x 10', and pantry 23' x 10' in it.	
	(a) Cook-house . . . . .	as	in	item	(i) (b)		
	(b) Officer's latrine . . . . .	as	in	item	6-B		
	(f) Servants' quarters . . . . .	as	in	item	(i) (i)		
	(i) Store-room . . . . .	as	in	(i)			
	(j) Enclosure wall or fence . . . . .	as	required				
	(vi) 3 batteries, R. A., or a head-quarters wing B. I., in the hills or in huttid camps—						
	Mess-room . . . . .	27	20	10	3,240	9' verandah in front and for half the back of the building with lavatory 13½' x 7½', and store-room 8' x 7½' in it.	4-huttid camp.
	Ante-room . . . . .	27	20	10			
	Billiard-room . . . . .	27	20	10			
	Bearer's room . . . . .	10	10	10			
	Mess sergeant's quarters—						
	Sergeant's room* . . . . .	20	12	10	1,090	9' verandah in front. Lamp and bath-rooms at back, each 7½' x 6'.	Do.
	Abdar's room* . . . . .	20	12	10			
	(a) Cook-house— . . . . .	as	in	item	6-A		
	(b) Officers' latrines— . . . . .	as	in	item	(i) (b)		
	(f) Servants' quarters— . . . . .	as	in	item	6-B.		
	(i) Store-rooms— . . . . .						
	Block of 3 rooms, each . . . . .	20	15	8	1,320		

\* This room may be divided into two, if desired.

Item No.	Buildings.	Length.	Breadth	Height	Plinth area, approximate	Remarks.	Type plan and series.
6-B	SERVANTS' QUARTERS FOR OFFICERS' MESSES OF UNITS OR GROUPS OF UNITS. (i) For 10 officers or under in the plains. 6 quarters, each (ii) For 10 officers or under in the hills. 6 quarters, each (iii) For 11 to 15 officers in the plains. 7 quarters, each (iv) For 11 to 15 officers in the hills. 7 quarters, each (v) For 16 to 20 officers in the plains. 9 quarters, each (vi) For 16 to 20 officers in the hills. 9 quarters, each (vii) For over 20 officers in the plains. 10 quarters, each (viii) For over 20 officers in the hills. 10 quarters, each  QUARTERS FOR DEPARTMENTAL OFFICERS, WARRANT AND N. C. OFFICERS AND CIVILIAN GAZETTED AND NON-GAZETTED OFFICERS AND SUBORDINATES—NEW SCALE.	Ft.	Ft.	Ft.	Sq. Ft.	Where a pipe water supply is laid on to the mess house and taps are provided in cook-house, pantry and mess lavatory, the number of quarters should be reduced by one.  For the individuals shown against class B in paragraph 5 to the number 9 or less, the full number of quarters should be given; for 10 to 12, one quarter less allowing for 2 men being single; for 13 to 20, 2 less Verandah 8 (in the clear) all round, with 1 dressing and 3 bath-rooms, a pantry and store-room in it. The authorized floor area of main rooms is 1,314 sq. ft. For height of quarters see paragraph 5.	
8	CLASS B QUARTERS (i) In the plains, detached quarter. Drawing-room . . . Dining-room . . . Hall . . . 2 bed-rooms, each . . . 1 bed-room . . . (ii) In the plains, semi-detached quarter. (a) Cook-house— Kitchen . . . (f) Servants' quarters— Block of 4 quarters, each . . . (g) Coach house and stable— Coach house . . . Stable . . . (iii) In the hills, detached quarter. Drawing room . . . Dining-room . . . Bed-room . . . Ditto . . . (iv) In the hills, semi-detached quarter. Rooms . . . Double-storied portion . . . Single . . .	18 18 6 15 12 ... 12 12 8 8 15 14 15 14 same ... ...	16 16 16 16 16 ... 10 10 12 12 14 12 12 12 as above ... ...	9 9 9 9 9 ... 9 9 9 9 12 12 12 above ... ...	3,780 3,190 210 643 330 1,670 780 210	See remarks against (i) 6' verandah in front and 7½ verandah for sides of each side, with 2 bath-rooms, pantry and store-room in it. The authorized floor area of main rooms is 755 sq. ft.  6' verandah on 2 sides of the lower floor.	

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
8	CLASS B QUARTERS— contd. (1c) <i>In the hills, semi-detached quarter—</i> contd.						
	(a) Cook-house—						
	Kitchen . . . . .	10	8	8	420	With a 4' passage to the dining-room.	
	Fuel-store . . . . .	5	8	8			
	Verandah . . . . .	19	4				
	(f) Servants' quarters—						
	Block of 4 quarters each . . . . .	10	8	8	456		
	(g) Stable . . . . .	8	12	9	170		
9	CLASS C QUARTERS, SEMI-DETACHED.						
	(i) <i>In the plains</i>						
	2 main rooms, each . . . . .	20	14	.	2,780	For the individuals shown against class C in paragraph 6 to the number 7 or less, the full number of quarters to be built, for 8 to 10 one quarter less; for 11 to 15, two quarters less; for 16 to 20, three quarters less; this is to allow for 2 single men sharing one quarter.	
	2 bed-rooms, each . . . . .	14	14	.			
	1 bed-room . . . . .	14	11	.			
	(a) Cook-house—						
	Kitchen . . . . .	10	10	9½	170		
	(f) Servants' quarters—						
	Block of 3 quarters, each . . . . .	12	10	9	487		
	(g) Stable . . . . .	12	8	9	170	Verandah 8' (in the clear) on 3 sides, with 3 bath-rooms, a pantry and a store-room in it. The authorized floor area of the main rooms is 1,105 sq ft.	
	(ii) <i>In the hills</i>					For height of quarters see paragraph 5.	
	Same as class B quarters	Item 8	(11)	.	.	See remarks above.	
	Subsidiary buildings . . . . .	as in item 8	(1c)	.	.	Except that 3 servants' quarters instead of 4 should be given.	
10	CLASS D QUARTERS.						
	(i) <i>In the plains, semi-detached</i>						
	2 main rooms, each . . . . .	16	15	.	2,320	Same proportion of quarters to be built as in class C, except for warrant and N C officers and civilian non-gazetted officers and subordinates belonging to arsenals when class B proportion will be given.	
	2 bed-rooms, each . . . . .	16	12	.			
	(ii) <i>In the plains, built in blocks.</i>	as in	(i)	.	2,080	For S and T N C. Os exceeding 3 in number, married quarters will be provided for 50 per cent. only.	
						In the event of an odd number of quarters being required the extra quarter will be on the married scale.	
						For station hospitals with 100 beds and upwards, one out of every four assistant surgeons will be provided with quarters on the single scale.	
						9½' verandah on 3 sides, with 2 bath-rooms, a pantry and a store-room in it.	
						The authorized floor area of main rooms is 864 sq ft.	
						For height of quarters see paragraph 5.	





Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate	Remarks.	Type plan and service.
17	SUB-CONDUCTOR'S QUARTERS. (i) <i>In the plains.</i> Sitting-room . . . . . 2 bed-rooms, each . . . . . Subsidiary buildings . . . . .  (ii) <i>In the hills.</i> Same as for a conductor	Ft 18 16 as	Ft. 16 10 in	Ft. 17 17 item	Sq Ft. 1,840 16 (i)	The authorized floor area is 608 sq ft. 10' verandah at front and back with 2 bath-rooms in it. Except that when quarters for sub-conductors are built in blocks, 3 servants' quarters are given for every 2 sub-conductors with one extra for an odd number. See remarks against item 16 (i). The authorized floor area is 480 sq ft.	
18	SERGEANTS' QUARTERS  Classes A, B and C— Same as for regimental N. C. Os— With the addition for each quarter of (f) Servant's quarter (g) Stable  QUARTERS FOR REGIMENTAL, WARRANT AND N. C. OFFICERS AND MARRIED RANK AND FILE.	see	item	20	to 22 320	N. C. Os. of any military staff department are entitled to class A quarters, built in blocks of 2 or more quarters, if possible. N. C. Os. attached to native corps are entitled to sergeants' quarters of classes A, B or C, according to the position held by them in the corps.	
19	WARRANT OFFICERS' QUARTERS. (i) <i>In the plains.</i> (a) Cook-house . . . . . (f) Servants' quarter  (ii) <i>In the hills.</i> 4 rooms, each . . . . . 2 bath-rooms . . . . . (a) Cook-house . . . . .	as as 12  12 6 as	in in 10  12 7 in	item item 9  10 9 item	10 (i) 21(i)(a) 169  21(ii)(a)	Authorized for 1st and 2nd class master gunners, band masters, sergeant majors, R. A., sergeant majors (regimental), schoolmasters and schoolmistresses. Quarters for master gunners, band masters, and sergeant majors to be detached or semi-detached; those for schoolmasters and schoolmistresses to be attached to school, or built in one block of two semi-detached quarters. Warrant officers of the British Service employed on the staff, when supplied with quarters at the public expense, will be allowed the accommodation granted to corresponding ranks attached to corps. Authorized for — Master gunners, 3rd class; quartermaster sergeants (regimental); provost sergeants of military prisons. For height of quarters see paragraph 5.	1-bnitted camp.
20	CLASS A QUARTERS* (i) <i>In the plains.</i> 2 rooms, each . . . . . 2 rooms, each . . . . . 2 bath-rooms, each . . . . .	16 13 10	13 10 8	... 10 10	2,230		21

\* To be attached to blocks of other sergeants' quarters.



Item No.	Building	Length.	Breadth.	Height.	Plinth area approximate	Remarks.	Type plan and series.
30	<p><b>GYMNASIUM.</b> (a) For 1,000 up to 2,000 men.</p> <p>Hall . . . . . 80</p> <p>Officers' dressing room . . . . . 16</p> <p>Men's dressing room . . . . . 15</p> <p>Store room . . . . . 16</p>	Ft	Ft	Ft	Sq. Ft.	<p>(e) For a station, with a garrison of over 2,000 men, two gymnastic halls should be provided on these scales, according to the strength of the garrison.</p> <p>(ii) A boarded floor should be given throughout every gymnasium, except in the dressing and store rooms.</p> <p>Details of gymnastic apparatus will be found in the book of standard plans of gymnastic apparatus. A small latrine and urinary is to be built contiguous to the men's dressing room, and a similar addition for the officers on the other side.</p>	
	<p>(b) For 450 men and over, but less than 1,000 men.</p> <p>Hall . . . . . 76</p> <p>Officers' dressing room . . . . . 16</p> <p>Men's dressing room . . . . . 12</p> <p>Store room . . . . . 12</p>	76	38	12	4,332	See remarks at (ii) above.	
	<p>(c) For less than 450 men.</p> <p>Hall . . . . . 50</p> <p>Officers' dressing room . . . . . 16</p> <p>Men's dressing room . . . . . 12</p> <p>Store-room . . . . . 12</p>	50	38	12	3,240	See remarks at (ii) above.	
31	<p><b>INSTITUTE (EXCLUDING LIQUOR BAR AND THEATRE) FOR BRITISH TROOPS IN THE PLAINS AND HILLS.</b> (i) For 751 to 900 men Library portion— Reading room . . . . . 44</p>	44	30	16		<p>These institutes will ordinarily be double storeyed buildings, the ground floor containing the reading room, hall (library portion), writing room, book room, caterer's quarters, billiard room, corporals' room, supper room, supper issue room, branch liquor bar, grocery bar, store-rooms, office and lavatory, and the first floor containing the games room, hall (recreation portion) and temperance room. Two sets of trays (one for the supper room and the other for the temperance room) each with a drying rack and soakage pit, will be provided as fixtures in the back verandah.)</p> <p>For hills scale see para. 37.</p>	
	<p>Hall . . . . . 24</p> <p>Writing room (including book-room) . . . . . 29</p>	24	32	16			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
31	INSTITUTE (EXCLUDING LIQUOR BAR AND THEATRE) FOR BRITISH TROOPS IN THE PLAINS AND HILLS—contd.	Ft.	Ft.	Ft.	Sq. Ft.		
	(a) For 751 to 900 men—contd						
	Recreation and refreshment portion:—				22,082		
	Temperance room . . . . .	44½	30½	15		} In upper storey.	
	Hall . . . . .	24½	32½	15			
	Games room . . . . .	44½	30½	15		} Three billiard tables.	
	Billiard room . . . . .	58	32	16			
	Supper . . . . .	67½	32	16			
	Supper issue room . . . . .	29	16½	16			
	Branch liquor bar . . . . .	29	14	16			
	Grocery bar . . . . .	33	14	16			
	Store-room . . . . .	15½	15½	16			
	Office . . . . .	15½	15½	16			
	Store . . . . .	29	10	10		} In the verandah.	
	Lavatory . . . . .	18	9½	10			
	Corporals' room . . . . .	38	32	16		One billiard table.	
	Caterer's quarters—						
	Bed-room . . . . .	14	13½	16		} In the verandah.	
	Sitting room . . . . .	16	14	16			
	Bath-room . . . . .	10	8	10			
	(a) Cookhouse containing—						
	Kitchen . . . . .	23½	16	13	} 1,124	With an 8' verandah in front containing a fuel store, 7½' x 3½'.	10 Hospital modified.
	Scullery . . . . .	18	12	13			
	Meat store . . . . .	8	8	8			
	(b) Latrine—						
	Privy of 2 seats . . . . .	5½	10	9	105	Not to be given when there is a barrack latrine near.	132 B. I.
	(d) Urinary—						
	4 compartments . . . . .	10	6½	7	85	.....	133 B. I.
	(ii) For 651 to 750 men						
	Library portion—						
	Reading room . . . . .	40	24	16		} Includes book-room.	
	Hall . . . . .	24	26	16			
	Writing room . . . . .	21½	24	16			
	Recreation and refreshment portion—						
	Temperance room . . . . .	40½	24½	15		} In upper storey.	
	Hall . . . . .	24½	26½	15			
	Games room . . . . .	40½	24½	15		} Two billiard tables.	
	Billiard room . . . . .	40½	32	16			
	Supper room . . . . .	62	26	16			
	Supper issue room . . . . .	29	12	16	} 18,076		
	Branch liquor bar . . . . .	29	12	16			
	Grocery bar . . . . .	26	14	16			
	Store-room . . . . .	15½	12½	16			
	Office . . . . .	15½	12½	16			
	Store . . . . .	29	10	10	...	} In the verandah.	
	Lavatory . . . . .	18	9½	10	...		
	Corporals' room . . . . .	28	32	16		One billiard table.	
	Caterer's quarters—						
	Bed-room . . . . .	17	10½	16		} In the verandah.	
	Sitting room . . . . .	17	13	16			
	Bath-room . . . . .	10	8	16			
	(a) Cookhouse . . . . .	as in (i)			1,124		
	(b) Latrine . . . . .	as in (i)			105		
	(d) Urinary . . . . .	as in (i)			85		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
31	INSTITUTE (EXCLUDING LIQUOR BAR AND THEATRE) FOR BRITISH TROOPS IN THE PLAINS AND HILLS— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(iii) For 551 to 650 men						
	Library portion—						
	Reading room . . .	36	24	16	17,339	Includes book-room.	
	Hall . . .	22	23	16			
	Writing room . . .	17½	21	16			
	Recreation and refreshment portion—						
	Temperance room . .	36½	24½	15	17,339	In upper storey.	
	Hall . . .	22½	23½	15			
	Games room . . .	36½	24½	15			
	Billiard room . . .	40	32	16			Two billiard tables.
	Supper room . . .	60	28	16			
	Supper issue room . .	29	13	16			
	Branch liquor bar . .	29	12	18			
	Grocery bar . . .	26	14	16			
	Store-room . . .	12½	14	16			
	Office . . .	12½	14	16			
	Store . . .	28	10	10	...	In the verandah.	
	Lavatory . . .	15	9½	10	...		One billiard table
	Corporals' room . . .	28	32	16			
	Caterer's quarters . .	as	in	(ii)			
	(a) Cookhouse . . .	as	in	(i)	1,124		
	(b) Latrine . . .	as	in	(i)	105		
	(d) Urinary . . .	as	in	(f)	85		
	(iv) For 451 to 550 men						
	Library portion—						
	Reading room . . .	30	24	16	15,666	Includes book-room.	
	Hall . . .	18	26	16			
	Writing room . . .	14½	21	16			
	Recreation and refreshment portion—						
	Temperance room . .	32½	24½	15	15,666	In upper storey.	
	Hall . . .	18½	26½	15			
	Games room . . .	30½	24½	15			
	Billiard room . . .	38	28	16			Two billiard tables.
	Supper . . .	53	26	16			
	Supper issue room . .	27	13	16			
	Branch liquor bar . .	27	12	16			
	Grocery bar . . .	26	13	16			
	Store-room . . .	12½	12½	16			
	Office . . .	12½	12½	16			
	Store . . .	27	10	10	In the verandah.	One billiard table.	
	Lavatory . . .	12	9½	10			
	Corporals' room . . .	25	28	16			
	Caterer's quarters . .	as	in	(ii)			
	(a) Cookhouse containing—						
	Kitchen . . .	19	16	13	1,005	With an 8' verandah in front, containing a fuel store, 7½' x 3½'.	10 Hospital, modified.
	Scullery . . .	16	12	13			
	Meat store . . .	8	8	8			
	(b) Latrine—					See remarks against (i) (b).	
	Privy of 1 seat . . .	4	3	...	40		
	(d) Urinary—					...	
	2 compartments . .	6½	6	7	49		133 B. f.

Item No.	Buildings.	Length.	Breadth.	Height	Plinth area, approximate.	Remarks.	Type plan and series.
21	INSTITUTE (EXCLUDING LIQUOR BAR AND THEATRE) FOR BRITISH TROOPS IN THE PLAINS AND HILLS— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(c) For 351 to 450 men						
	Library portion—						
	Reading room . . . . .	25	24	16	14,285	Includes book-room.	
	Hall . . . . .	26	14	16			
	Writing room . . . . .	21	10½	16			
	Recreation and refreshment portion—						
	Temperance room . . . . .	23½	24½	15	14,285	In upper storey, Two billiard tables.	
	Hall . . . . .	14½	26½	15			
	Games room . . . . .	25½	24½	15			
	Billiard room . . . . .	38	28	16			
	Supper room . . . . .	54	26	16			
	Supper issue room . . . . .	26	13	16			
	Branch liquor bar . . . . .	28	12	16			
	Grocery bar . . . . .	26	12	16			
	Store-room . . . . .	12½	12½	16			
	Office . . . . .	12½	12½	16			
	Store . . . . .	26	10	10	12,990	In the verandah.	
	Lavatory . . . . .	9	9½	10			
	Corporals' room . . . . .	16	28	16			
	Caterer's quarters . . . . .	as	in	(ii)			
	(a) Cookhouse . . . . .	as	in	(iv)			
	(b) Latrine . . . . .	as	in	(v)			
	(d) Urinary . . . . .	as	in	(iv)			
	(e) For 201 to 350 men						
	Library portion—						
	Reading room . . . . .	26	12	16	12,990	In upper storey, Two billiard tables.	
	Hall . . . . .	26	14	16			
	Writing room . . . . .	26	11½	16			
	Book-room . . . . .	13½	8	16			
	Recreation and refreshment portion—						
	Temperance room . . . . .	26½	24½	15			
	Hall . . . . .	14½	26½	15			
	Games room . . . . .	22½	24½	15			
	Billiard room . . . . .	38	28	16			
	Supper room . . . . .	40	24	16			
	Supper issue room . . . . .	24	12	16	1,005	In the verandah.	
	Branch liquor bar . . . . .	24	11½	16			
	Grocery bar . . . . .	24	12	16			
	Store-room . . . . .	11½	12	16			
	Office . . . . .	11½	12	16			
	Store . . . . .	24	10	10			
	Lavatory . . . . .	9	9½	10			
	Corporals' room . . . . .	14	28	16			
	Caterer's quarters—						
	Bed-room . . . . .	13½	13½	16			
	Sitting room . . . . .	23	10	16	40	See remarks against (i) (b).	
	Bath-room . . . . .	10	8	16			
	(a) Cookhouse . . . . .	as	in	(iv)			
	(b) Latrine . . . . .	as	in	(iv)			
	(d) Urinary . . . . .	as	in	(iv)	48		
	(iii) For and up to 200 men						
	Library portion—						
	Reading room . . . . .	20	12	16	1,005	In the verandah.	
	Hall . . . . .	26	12	16			
	Writing room . . . . .	11½	11½	16			
	Book-room . . . . .	11½	8	16			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.		Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq.	Ft.		
31	INSTITUTE (EXCLUDING LIQUOR BAR AND THEATRE) FOR BRITISH TROOPS IN THE PLAINS AND HILLS—conoid.							
	(vi) For and up to 200 men—conoid.							
	Recreation and refreshment portion—							
	Temperance room . . . . .	20½	21½	15			} In upper storey.	
	Hall . . . . .	12½	28½	15				
	Games room . . . . .	16½	24½	15			One billiard table.	
	Billiard room . . . . .	23	24	16				
	Supper room . . . . .	33	21	16				
	Supper issue room . . . . .	27	12	16	10,620			
	Branch liquor bar . . . . .	20	11½	16				
	Grocery bar . . . . .	10	21	16				
	Store-room . . . . .	11½	12	16				
	Office . . . . .	11½	12	16				
	Store . . . . .	10	20	10			} In the verandah.	
	Lavatory . . . . .	6	9½	10				
	Corporals' room . . . . .	14	24	16				
	Caterer's quarters—							
	Bed-room . . . . .	16	11½	16				
	Sitting room . . . . .	16	12	16				
	Bath-room . . . . .	10	8	16			In the verandah.	
	(a) Cookhouse containing—							
	Kitchen . . . . .	16	14½	13			} With an 8' verandah in front, containing a fuel store 7½ x 3½.	10 Hosp.
	Scullery . . . . .	16	8	13	677			pital.
	Meat store . . . . .	8	8	8				modified.
	(b) Latrine . . . . .	as	10	(10)	40			132 B. I.
	(d) Urinary—							
	1 compartment . . . . .	6½	2½	7	28			133 B. I. modified.
32	PRAYER ROOM.							
	(i) For a battalion of infantry or its equivalent in the plains							
	Main room . . . . .	40	18	20			} 2,050	
	2 side rooms . . . . .	14½	8	12				
	Porch . . . . .	10	10	12				
	(ii) For a battalion of infantry or its equivalent in the hills							
	Main room . . . . .	30	14	12			} 1,580	
	2 side rooms . . . . .	14	10	12				
	Porch . . . . .	10	10	9				
	increased 10' in length, and for each additional battery or company it will be increased 5' in length. For 2 battalions the main room will be 60' long. Pankhss and peg racks are authorized.							
	For a wing the main room will only be 18' long. For a battery the main room will be increased ½, and for each additional battery ¼, the length allowed for a battalion.							47 B. I. modified.
32A	THEATRE.							
	(v) For 4 batteries R. H. & R. F. A. with ammunition columns 195 seats . . . . .	61	21	16			See paragraph 39.	
	(vi) For 4 companies R. G. A. (Inland) 140 seats . . . . .	40	21	16			If there are less than 3 batteries or companies of artillery at a station, the supper room should be used as a theatre.	



Item No	Buildings.	Length.	Breadth	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
32A	THEATRE— <i>contd.</i>	Ft.	Ft	Ft	Sq. Ft.		
	(iii) For 4 companies R. G. A. (Coast). 110 seats	41	24	16			
	(iv) For R. F. A. brigade or group of 3 batteries R. H. & R. F. A. with a R. F. A. ammunition column. 145 seats	50	24	16			
	(v) For 3 companies R. G. A. (Inland). 105 seats	39	24	16			
	(vi) For 3 companies R. G. A. (Coast). 85 seats	34	24	16			
	(vii) For a regiment of British cavalry. 150 seats	52	24	16			
	(viii) For a battalion of British infantry. 250 seats	80	24	16			
	(ix) For headquarters and 6 companies of British infantry. 200 seats	65	24	16			
	(x) For headquarters wing of British infantry. 140 seats	49	24	16			
	(xi) For detached wing of British infantry. 110 seats	41	24	16			
33	VETERINARY HOSPITALS.						
	(i) Station veterinary hospital—class I (General Central.) Main building— Stalls, 6 per cent. of strength, each	14	8	15½		A 6½' verandah on 3 sides and a central passage 6' wide through the length of the building. The slinging bars are to be 8' from the ground and firmly fixed. The blocks and pulleys for slings will be provided as fixtures by the M. W. S. Jhamps with 2 poles each are allowed when considered absolutely necessary by the veterinary officer. Stocks are to be provided on the scale of one per first class veterinary hospital. See para. 56.	87 A, B, C.
	Loose boxes, 1 per cent. of strength— Ordinary cases, each	14	12	15½			
	Special for colic and eye cases, each	14	13½	15½			
	Outstandings, 7 per cent. of strength, each	14	8	...			
	2 sling boxes, each	14	12	15½			
	Office	14	16	15½			
	Pharmacy	14	16	15½			
	Orderlies' room	14	14	15½			
	Store	14	14	15½			
	Isolation block— 2 Isolation boxes, each	14	14	15½	911	A 6½' verandah on 2 sides, each containing a store room, 6½' x 5½'.	87 B, B. C.
	Casting shed	25	26	10	1,218.		87 B, B. C.
	Ambulance shed	25	14	10			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series
33	<b>VETERINARY HOSPITALS—contd.</b>	<b>Ft.</b>	<b>Ft.</b>	<b>Ft.</b>	<b>Sq Ft.</b>		
	(5) <i>Station veterinary hospital—class I. (General Central)—contd.</i>						
	Boiling house and store—					Two boilers for each building are to be supplied by the M. W. S.	87 A, B. C.
	Room for boiling purposes . . .	8	8	8½	395		
	Grain store . . .	12	8	8½			
	Wood store . . .	12	8	8½			
	Watering trough . . .	length as required.				See para. 56.	3 Misc.
	Irrigation stand and hard.						
	Mobilisation store . . .	33½	8½	12	670	With 6½' verandah in front when considered necessary by P. V. O. in India.	
	Quarters for followers—						
	Byes 2 per squadron and 1 per battery. . . each . . .	12	10	10			
	1 bhuti . . .						
	1 sweeper . . .						
	Farrier sergeant's quarters with subsidiary buildings. . .	as in item 10.					
	Shoeing smith's quarters with subsidiary buildings . . .	according to rank.					
	Enclosure wall . . .	as required.					
	(vi) <i>Station veterinary hospital, class I (for British cavalry)</i>	same as in (i)				Except that stalls are provided at 7 per cent, loose boxes at 2 per cent, and outstandings at 9 per cent of strength of cavalry. See remarks against (i).	
	(vii) <i>Station veterinary hospital, class II (for R. II. A. or R. F. A.)</i>						
	Main building—						
	Stalls 6 per cent of strength, each . . .	14	8	15½	320	See para. 56. One loose box will be fitted with slinging bars. A 6½' verandah will be given on 3 sides and a central passage 6' wide through the length of building.	87 A, B. C.
	Loose boxes, 3 per cent of strength.						
	Special cases, colic, etc.— . . .	14	13½	15½			
	Ordinary . . .	14	12	15½			
	Outstandings 9 per cent of strength . . .	14	8				
	Office . . .	14	16	15½			
	Pharmacy . . .	14	16	15½			
	Store room . . .	14	14	15½			
	Isolation box . . .	14	14	15½			87 B, B. C.
	Boiling house and grain store . . .	as in (i)			210		
	Watering trough . . .	length as required.					3 Misc.
	Enclosure wall . . .	as required.					
	(iv) <i>Veterinary hospital for British mountain battery in the hills</i>						
	1 compartment of 4 standings . . .	34	13	8	2,014	One loose box will be fitted as a casting shed, with slinging bars. Doors to be provided in the outer walls of standings and loose boxes. See para. 56.	87 A, F. C.
	3 loose boxes, each . . .	11½	13	8			
	Surgery . . .	12	13	8			
	Office . . .	12	13	8			
	Central passages . . .	47½	6				

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
32A	THEATRES— <i>contd.</i>	<i>Ft.</i>	<i>Ft.</i>	<i>Ft.</i>	<i>Sq. Ft.</i>		
	(iii) For 4 companies R. G. A. (Coast). 110 seats . . . . .	41	24	16			
	(iv) For R. F. A. brigade or group of 3 batteries R. H. & R. F. A. with a R. F. A. ammunition column 145 seats . . . . .	50	24	16			
	(v) For 3 companies R. G. A. (Inland). 105 seats . . . . .	39	24	16			
	(vi) For 3 companies R. G. A. (Coast). 85 seats . . . . .	34	24	16			
	(vii) For a regiment of British cavalry. 150 seats . . . . .	52	24	16			
	(viii) For a battalion of British infantry. 250 seats . . . . .	80	24	16			
	(ix) For headquarters and 6 companies of British infantry. 200 seats . . . . .	65	24	16			
	(x) For headquarters wing of British infantry. 140 seats . . . . .	49	24	16			
	(xi) For detached wing of British infantry 110 seats . . . . .	41	24	16			
33	VETERINARY HOSPITALS.						
	(i) Station veterinary hospital—class I. (General Central.) Main building— Stalls, 6 per cent. of strength, each . . . . .	14	8	15½		A 6½' verandah on 3 sides and a central passage 6' wide through the length of the building. The slinging bars are to be 8' from the ground and firmly fixed. The blocks and pulleys for slings will be provided as fixtures by the M. W. S. Jhamps with 2 poles each are allowed when considered absolutely necessary by the veterinary officer. Stocks are to be provided on the scale of one per first class veterinary hospital. See para. 66.	87 A, B. C.
	Loose boxes, 1 per cent. of strength— Ordinary cases, each . . . . .	14	12	15½			
	Special for colic and eye cases, each . . . . .	14	13½	15½			
	Outstandings, 7 per cent. of strength, each . . . . .	14	8	...			
	2 sling boxes, each . . . . .	14	13	15½			
	Office . . . . .	14	16	15½			
	Pharmacy . . . . .	14	16	15½			
	Orderlies' room . . . . .	14	14	15½			
	Store . . . . .	14	14	15½			
	Isolation block— 2 Isolation boxes, each . . . . .	14	14	15½	941	A 6½' verandah on 2 sides, each containing a store room, 6½' x 5½'.	87 B, R. C.
	Casting shed . . . . .	25	25	10	1,218		87 R.
	Ambulance shed . . . . .	25	14	10			B. C.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
35	BARRACKS FOR MARRIED RANK AND FILE.  Two blocks each of 8 class B quarters . . . . .	As in item 21(5)	21(5)	11,310		The strength to be accommodated is 3 per cent. of 542, that is, quarters for 16 men are required.	132 B. I.
	(a) Cook-houses— . . . . .	as in item 21(5)	(a)			Suitably placed for the two blocks of quarters,	132 B. I.
	(b) Latrines . . . . .	see para. 28					
	(d) Urinaries— 2 urinaries of one compartment, each . . . . .	6½	2½	7	28		
36	QUARTERS FOR WARRANT OFFICERS. 4 class D qrs, each . . . . .	as in item 10(1)	10(1)	2,320		One each for the regimental serjeant-major, band-master, school master and school mistress. In detached, or semi-detached quarters, but see item 62.	
	(a) 4 cook-houses, each . . . . .	as in item 21(1)	(a)			Same as above.	
	(f) Servants' qrs.— 2 blocks of 2, quarters, each . . . . .	10	9	9	300	Same as above. Servants' latrine is not authorised.	
37	QUARTERS FOR STAFF SERJEANTS AND SERJEANTS.  One block containing— 1 class A and 10 class B quarters . . . . . One block of 12 class B quarters . . . . .	as in item 20(1) and 21(1)	20(1) and 21(1)	15,724		At the end of the single men's barracks, there are 27 serjeants' quarters; one serjeant will be in the officers' mess; and there are quarters for provost serjeant, canteen serjeant, and caterer of the institute; or 31 in all; leaving 23 to be accommodated in the quarters for married serjeants. The scale for married quarters is 40% of 54, i.e., 22, so this number is one in excess, but it is equally cheap to provide a quarter in the married block as at the end of a barrack.	
	(a) Cook-houses— . . . . .	as in item 21(1)	(a)				
	(b) Latrines— . . . . .	see para. 28				Suitably placed for the two blocks.	132 B. I. modified.
38	ARMOURERS' SHOP, Work-room . . . . . Forge-room . . . . . Water and wood store . . . . . Drying-room . . . . .	30 24 10 10	24 9½ 10 10	16½ 16½ 10 10	2,160	See para. 45.	41A to C. B. I.
39	BLACKSMITHS' FORGE AND SHOEING SHEDS Forge-room . . . . . Store-room . . . . . 2 shoeing sheds (verandahs) each . . . . .	50 20 60½	20 8½ 15	16 16 12½	3,500	See para. 44. A third forge may be provided where necessary.	9 B. C.
40	BLACKSMITHS' FORGE AND WORKSHOP VOLUNTARY. Forge . . . . .	23	22 or 24		900		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
41	RECREATION GROUND . . .	...	...	...	...	See para. 51.	
42	DRY EARTH STORE . . .	...	...	...	...	See para. 31.	
43	FENCING SCHOOL— 1 room . . .	50	24	...	...	The gymnasium or theatre can usually be used for this purpose, in which case this room will not be required. A boarded floor must be given.	
44	FIRE ENGINE SHED . . .	...	...	...	...	See item 28.	43 B I.
45	FIVES COURT . . .	...	...	...	...	See para. 28.	...
46	GYMNASIUM . . .	...	...	...	...		
47	INSTITUTE—  Liquor bar portion— Privates' room . . . Bar or issue room . . . Beer store . . . Corporals' room . . . Serjeants' quarter . . . Theatre . . . (b) Latrine— Privy of 1 seat . . . (d) Urinary— 1 compartment . . .	28 10 16 14 as in item 23 45 4 6½	24 24 24 24 24 24 2½	16 16 16 16 23 16 3 7	5,573 3,385 40 28	The space authorised, exclusive of the space taken up in the verandah, is 2,032 sq. ft.  Not to be given when there is a barrack latrine near.	132 B I. 133 B I. modified.
47A	LAUNDRY STORE. For a regiment. 2 rooms each . . .	20	13	13½	683	.....	74 B I.
48	MAGAZINE— 1 room for S. A. ammunition . . .	16	10	16	340	This will usually be provided in the central station magazine. See para. 47. If so, a small expense store to hold 60 boxes of ammunition will be provided in the lines.	
49	Magazine for explosives— 1 room . . .	10	10	10	247	With a 6' verandah in front. Only to be provided in stations where the explosives cannot be stored in an arsenal. See para. 48.	
50	NIGHT PICQUET GUARD ROOM 1 room (without verandah). . .	..	...	...	...	Should only be constructed if considered necessary by the local authorities. Whenever possible the night guard picquet should be accommodated in the quarter guard building. When constructed accommodation will be provided on the scale of 90 sq. ft. per man.	
51	ORDERLY AND COURT-MARTIAL ROOM. Orderly-room . . . Bath-room . . . Court-martial room . . .	24 9½ 36	20 9½ 20	16 9½ 16	4,170	Officers' rooms will only be given under special sanction.	45 B I. modified.
52	PARADE GROUND.					No size laid down.	
53	PAY OFFICE. 1 room . . .  (d) Urinary— 1 compartment . . .	24 6½	15 2½	16 7	860 28	Can be given under the same roof as the orderly room.  For the offices; only to be given if no latrine or urinary is near.	133 B I.

Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
53-A	Flange bath . . .	...	...	...	...	See paragraph 43-A	
	Bath	16	14	10½	1,650		
	2 passages, containing 2 shower baths, each	8	6	10			
	Dressing room . . .	10	20	10½			
54	PRAYER ROOM . . .	...	...	...	...	See item 32.	
55	QUARTER GUARD AND DETENTION ROOMS.						
	Guard-room for 18 men	67½	24	16	7,500		
	Guard detention room for 12 men . . .	45	24	16		.....	64A to 64D } B I modified.
	Provost sergeant's quarter . . .	as in item	22				
	Six barrack detention rooms, each . . .	13	10	16	2,980	.....	
	(b) Latrines—						
	4 seats, 2 for guard, and 2 for soldiers under sentence—						
	2 compartments, each . . .	12	5½	9	230	.....	64 B, B I modified.
	Covered passage for sentry . . .	7	5	9			
	(c) Lavatory—						
	1 room for 10 basins . . .	15	16	9	600		64 B, B I modified.
	4 private bath-rooms . . .	6½	5	9			
	(d) Urinary—						
	2 compartments . . .	6½	5	7	48		133 B I.
56	QUARTERMASTER'S STORES.						
	3 store rooms, each . . .	41½	24	11	6,380		
	Tailor's workshop . . .	21	15	11			17 B C.
	Quartermaster's office . . .	21	10	11			
	Dry store room . . .	13	8½	9			
	(d) Urinary—						
	1 compartment . . .	6½	2½	7	28	Only to be given if no latrine or urinary is near.	133 B I.
57	REGIMENTAL WORKSHOPS, VOLUNTARY.						
	Carpenter's shop . . .	50	22	16	7,780		
	store room . . .	41	12	9			
	Painter's shop . . .	22	22	16			
	Tinsmith's shop . . .	22	14	16			
	Shoemaker's shop . . .	22	22	16			69 B I.
	Bookbinder's shop . . .	14	10½	16			
	Watch-maker's shop . . .	14	10½	16			
	Printer's shop . . .	25	22	16			
	Two water-rooms, each . . .	8	8	9			
	(d) Urinary—						
	1 compartment . . .	6½	2½	7	28	Only to be given if no latrine or urinary is near.	133 B I.
58	RIDING SCHOOLS.						
	2 manéges, each . . .	...	...	...	...	See para 43 A.	37 R. A and 37 A, R. A.
59	RIFLE RANGE . . .	...	...	...	...	See revised type plan and para. 49.	49 A to C, H. J.
60	SADDLE AND STORE-ROOMS						
	4 buildings each—						
	2 saddle rooms, each . . .	30	24	16	5,040		
	2 store " " . . .	24	10	16		Each building is for a squadron, if convenient they may be divided up for half squadrons. They should be situated midway between the barracks and the stables.	19 B C.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
61	SADDLER'S AND SADDLETREE-MAKER'S SHOP.	Ft	Ft	Ft.	Sq. Ft.		
	Saddler's shop—						
	1 room . . . . .	30	20	16	3,920		20 B. C.
	2 rooms . . . . .	30	10	11½			
	Water-room . . . . .	10	10	11½			
	Saddletree-maker's shop—						
	1 room . . . . .	30	20	16	3,920		20 B. C.
	2 rooms . . . . .	30	10	11½			
62	SCHOOL.						
	Class room for 64 men	48	24	16	4,660	See para. 41.	21 B. C.
	" " " 36 children	22	24	16			
	2 water-rooms, each	6	10	9½			
	If the quarters for the schoolmaster and schoolmistress are combined with the school.	as	in	item	36	Cook-houses and warrant officers' quarters will also be necessary for the schoolmaster and mistress.	
	(b) Latrine—						
	Privy for boys . . . . .	10½	8½	9	330		71 E, B. I.
	" " girls . . . . .	10½	8½	9			
	Urinary for boys . . . . .	4½	3½	...			
	Dry earth shed . . . . .	4½	3½	...			
	(d) Urinary for men—						
	2 compartments . . . . .	6½	5	7	48		133 B. I.
63	SERGEANTS' MESS.						
	Mess-room . . . . .	50	24	16	5,656	A 10' verandah in the clear all round, containing the beer store, caterer's room, pantry, and a lavatory 9½' x 12' near the ante-room.	67 B. I.
	Ante-room . . . . .	30	24	16			
	Billiard room . . . . .	30	24	16			
	Beer store . . . . .	24	9½	9½			
	Caterer's room . . . . .	21	9½	9½	820	With a 7' verandah in front, containing a fuel store 6½' x 4½'.	67 B. I.
	Pantry . . . . .	8½	9½	9½			
	(a) Cook-house—						
	Kitchen . . . . .	18	18	13			
	Scullery . . . . .	13½	6	13	820		183 B. I.
	Cook's room . . . . .	10	6	8			
	Meat store . . . . .	6	6	8			
	(b) Latrine—						
	Privy of 2 seats . . . . .	10	5½	9	100		133 B. I.
	(d) Urinary—						
	Compartment . . . . .	6½	2½	7	28		133 B. I.
64	STABLES—						
	8 stables each for 70 horses, containing—						
	2 compartments, each for 8 horses, each . . . . .	64	14	...	11,154	Each block for a half squadron. The strength of horses is 561 ÷ $\frac{561}{8}$ = 70 horses to each half squadron.	18 B. C.
	6 compartments, each for 9 horses, each . . . . .	72	14	...			
	Central passage . . . . .	236	5	...			
	(d) Urinaries—						
	8 of 2 compartments, each . . . . .	6½	5	7	48	One to each block of stables	133 B. I.
65	KAHARS' HUT.						
	Hut for 4 kahars . . . . .	20	12	10	360	To be built near the quarter guard.	
66	VETERINARY HOSPITAL	...	...	...	...	See item 33.	
67	WELLS	as required			...	See para. 50.	126 B. C.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. ft.		
63	<b>ROYAL ARTILLERY.</b>						
	<b>BARRACKS FOR SINGLE RANK AND FILE.</b>						
	<i>In the plains.</i>						
	(i) <i>Battery, R. H. A. or R. F. A. on higher establishment.</i>					The strength is 164 for R. H. A. and 163 for R. F. A. battery, of whom 7 will be married. Accommodation is required for 156 single men and 4 single sergeants. This gives 3 section barracks for 52 men and 1 sergeant each. One sergeant will be accommodated in institute quarters.	4 R. A. modified.
	3 barracks, each containing:—						
	1 sergeant's quarter	as in item		23	11,620		
	2 dormitories for 18 men, each	67½	24	16			
	1 dormitory for 16 men.	60	24	16			
	Store-room	10	9	9½			
	<i>Battery, R. H. A. on lower establishment.</i>					Accommodation is required for 136 single men and 4 single sergeants.	
	<i>Battery, R. F. A. on lower establishment</i>					Accommodation is required for 132 single men and 4 single sergeants.	
	(a) <i>Combined dining hall and kitchen to hold—</i>						
	156 men { 2 rooms for 78 men, each	45½	24	16	7,500	With 10' verandah on 3 sides.	119 B.I. modified.
	1 kitchen	30	18	13		With 7' verandah in front containing 2 fuel stores 6½' x 2½' each.	
	2 sculleries, each	18½	8	13			
	2 cooks' rooms, each	8	8	8			
	2 meat stores, each	10	8	8			
	(b) <i>Latrines—</i>						
	Three latrines with 4 seats, each—					12 seats are authorized for a battery R. H. A. or R. F. A. For each section barrack.	132 B. I. modified.
	Privy	11	12	9	200		
	or one latrine as above and one latrine with 8 seats:—						
	Privy	21½	12	9	640	For two section barracks	132 B. I.
	Cart shed	11	8	7			
	Sweeper's room	8	6	7½			
	Dry earth shed	5½	4	4½			
	(c) <i>Lavatories—</i>						
	Three lavatories, each containing—						
	1 room for 12 basins	18	16	9	650	One for each section barrack.	138 B. I. modified.
	4 private bath-rooms	6½	5	9			
	(d) <i>Urinals—</i>						
	3 urinals containing—						
	2 compartments, each	6½	5	7	49	One urinary for each section barrack.	133 B. I.
	(ii) <i>Howitzer battery—</i>						
	2 barracks, each containing—						
	1 sergeant's quarter	as in item		23	11,960	The strength is 170 rank and file, of whom 7 are married. Accommodation is required for 4 single sergeants and 163 single rank and file; this gives 2 section barracks for 1 sergeant and 54 men each, and 1 section barrack for 2 sergeants and 56 men. If more convenient, 8 sub-section barracks may be constructed. One sergeant will be accommodated in the institute.	4 R. A. modified.
	3 dormitories for 18 men, each	67½	24	16			
	store-room	10	9	9½			
	1 barrack containing—						
	1 sergeant's quarter	as in item		23	12,300		
	2 dormitories, each for 18 men, each	67½	24	16			
	1 dormitory for 20 men	75	24	16			
	store-room	10	9	9½			



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. ft.		
68	BARRACKS FOR SINGLE RANK AND FILE— <i>contd.</i>						
	(a) Combined dining hall and kitchen.				7,740	With 10' verandahs on 3 sides. With 7' verandahs in front containing 2 fuel stores 6½' × 2½' each.	119 B. I. modified.
	2 dining halls, each for 82 men, each	48	24	16			
	1 kitchen	30	18	13			
	2 sculleries each	18½	8	13			
	2 cooks' rooms, each	8	8	8			
	2 meat stores, each	10	8	8			
	(b) Latrines	as in	(c)				
	(c) Lavatories	as in	(d)				
	(d) Urinaries	as in	(e)				
	(iii) Howitzer brigade ammunition column—						
	1 barrack containing—				10,870	The strength is 46 rank and file, of whom 2 are married.	4 R. A. modified.
	2 sergeants' quarters	as in item	22				
	2 dormitories, each for 22 men, each	82½	24	16			
	store-room	10	9	9½			
	(a) Combined dining hall and kitchen.				2,860	With 10' verandah on 3 sides. With 7' verandah in front containing 1 fuel store 6½' × 2½'.	119 B. I. modified.
	1 dining hall for 44 men	25½	24	16			
	1 kitchen	15	18	13			
	1 scullery	18½	8	13			
	1 cook's room	8	8	8			
	1 meat store	10	8	8			
	(iv) Heavy battery						
	1 barrack containing—				11,240	The strength is 96 rank and file, of whom 4 are married. Accommodation is therefore required for 92 single men and 3 single sergeants.	4 R. A. modified.
	2 sergeants' quarters	as in item	22				
	1 dormitory for 24 men	90	24	16			
	1 dormitory for 22 men	82½	24	16			
	store-room	10	9	9½			
	1 barrack containing—				10,450		
	1 sergeant's quarters	as in item	22				
	dormitories for 46 men.	as above					
	(a) Combined dining hall and kitchen—						
	1 dining hall for 92 men.	53½	24	16	4,170	With 10' verandah on 3 sides. With 7' verandah in front containing 1 fuel store 6½' × 2½'.	119 R. I. modified.
	1 kitchen	15	18	13			
	1 scullery	18½	8	13			
	1 cook's room.	8	8	8			
	1 meat store	10	8	8			
	(b) Latrine—				410	To be placed in a central position between the barracks	132 R. I. modified.
	Privy of 7 seats	18½	8½	7½			
	Cart shed	11	8	7			
	Sweeper's room	8	6	7½			
	(c) Lavatories—				650		138 R. I. modified.
	2, each containing—						
	1 room for 12 basins	18	16	9			
	4 private bath-rooms	6½	6½	9			
	(d) Urinaries—						
	2, each containing—						
	double compartment	6½	5	7			133 B. I.
	(e) Company, R. O. A.						
	2 barracks, each containing—						
	1 sergeant's quarter	as in item	22		13,290	The strength is 134 rank and file, of whom 6 are married. Accommodation is required for 129 single men and 2 sergeants.	4 R. A. modified.
	4 dormitories each	60	24	16			
	Store room	10½	8	9½			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series
		ft.	Ft.	Ft.	Sq. ft.		
63	BARRACKS FOR SINGLE BATTALION—contd.						
	(a) Combined dining hall and kitchen—						
	2 rooms for 65 men, each	38	24	16	6,770	With 10' verandah on 3 sides. With 7' verandah in front containing 2 fuel stores 6½' x 2½' each.	119 B.I. modified.
	1 kitchen	30	18	13			
	2 sculleries, each	18½	8	13			
	2 cooks' rooms, each	8	8	8			
	2 meat stores	10	8	8			
	(b) Latrine—						
	Privy of 10 seats	27½	12	9	730	To be placed in a central position between the barracks	132 B.I. modified.
	Cart-shed	11	8	7			
	Scupper's room	8	6	7½			
	Dry earth shed	5½	4	4½			
	(c) Lavatories—						
	2 lavatories, each containing—						138 B.I. modified.
	Room for 12 basins	18	16	9	650	One urinary for each barrack.	133 B.I.
	4 private bath-rooms	6½	5	9			
	(d) Urinaries	as in	in	(tr)	48		
	(vi) R. H. A. ammunition column						
	1 barrack containing—	as in item	23		4,540	The strength is 15 rank and file, of whom 1 is married. Accommodation is required for 1 single sergeant and 15 single men. This will usually be attached to one of the battalions.	4 R.A. modified.
	1 sergeant's quarters						
	1 dormitory for 14 men	52½	24	16			
	store-room	10	8	9½			
	(a) Combined dining hall and kitchen—	..	..	..	.....		
	(b) Latrine—						
	Privy of 2 seats	5½	8½	7½	60	.....	132 B.I. modified.
	(c) Lavatory—						
	1 room for 4 basins	}	..	..	..	To be provided in one of the battery section lavatories, which must be enlarged accordingly.	138 B.I. modified.
	1 private bath-room						
	(d) Urinaries—						
	single compartment	6½	2½	7	28		133 B.I.
	(vi) R. F. A. ammunition column						
	1 barrack containing—						
	2 sergeants' quarters	as in item	22		13,135	The strength is 58 rank and file, of whom 2 will be married. Accommodation is required for 2 single sergeants and 56 single men.	4 R.A. modified.
	2 dormitories, each for 18 men	67½	24	16			
	1 dormitory for 20 men	75	24	16			
	store-room	10	9	9½			
	(a) Combined dining hall and kitchen						
	1 dining hall	32½	24	16	3,195	With 10' verandah on 3 sides. With 7' verandah in front containing 1 fuel store, 6½' x 2½'.	119 B.I. modified.
	1 kitchen	16	18	13			
	1 scullery	18½	8	13			
	1 cook's room	8	8	8			
	1 meat store	10	8	8			



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
69	BARRACKS FOR MARRIED MAN AND WIFE— <i>concl'd.</i>	Ft.	Ft.	Ft.	Sq. ft.		
	(c) <i>Howitzer battery.</i>						
	Block of 7 class B quarters . . .	as in item	21 (i)	10,083	Accommodation is required for $\frac{170 \times 4}{100} = \text{say } 7 \text{ families.}$		
	(a) Cook-houses . . .	as in item	21	(i) (a)			
	(b) Latrines . . .	see para	28				
	(d) Urinaries . . .	as in (ii)		28	See remarks against (i) (d)		133 B. I. modified.
	(vi) <i>Howitzer brigade ammunition column.</i>						
	Block of 2 class B quarters . . .	as in item	21 (i)	3,768	Accommodation is required for $\frac{46 \times 4}{100} = 2 \text{ families. They would usually be attached to the family quarters for the howitzer battery.}$		
	(a) Cook-house . . .	as in item	21	(i) (a)			
	(b) Latrines . . .	see para	28				
	(d) Urinary . . .	6½ 2½	7	28			
	(vii) <i>Heavy battery.</i>						
	Block of 4 class B quarters . . .	as in item	21 (i)	6,285	Accommodation is required for $\frac{96 \times 4}{100} = 4 \text{ families.}$		
	(a) Cook-house . . .	as in item	21	(i) (a)			
	(b) Latrine . . .	see para	28				
	(d) Urinary . . .	6½ 2½	7	28			
	(viii) <i>Company, R. G. A.</i>						
	Block of 5 class B quarters . . .	as in item	21 (i)	7,566	Accommodation is required for $\frac{134 \times 4}{100} = 5 \text{ families.}$		
	(a) Cook-houses— . . .	as in item	21	(i) (a)			
	(b) Latrine . . .	see para	28				
	(d) Urinaries, 2 . . .	as in (ii)		28	One for each block.		
	(ix) <i>British mountain battery.</i>						
	<i>In the hills</i>						
	Block of 5 class B quarters . . .	as in item	21 (ii)	7,566	Accommodation is required for $\frac{120 \times 4}{100} = \text{say } 5 \text{ married men}$		1 hutted camp
	(a) Cook-houses . . .	as in item	21	(i) (a)			10-hutted camp.
	(b) Latrines . . .	see para	28				
	(d) Urinaries . . .	6½ 2½	7	28			
70	QUARTERS FOR STAFF SERJEANTS AND SERJEANTS						
	<i>In the plains</i>						
	(i) <i>For a battery, R. H. A. or R. F. A. on higher establishment</i>						
	Block of 7 class B quarters . . .	as in item	21 (i)	10,083	There are 2 staff serjeants 8 serjeants, and 1 carriage-artificer, of whom 56 per cent. of 7 are to be provided with family quarters. The remainder are to be accommodated in the three quarters at the end of the single men's barracks and in the institute quarters		
	(ii) <i>For a battery, R. H. A. or R. F. A. on lower establishment.</i>						
	Block of 6 class B quarters . . .	as in item	21 (i)	8,602			
	(iii) <i>For R. H. A. ammunition column.</i>						
	Block of 2 class B quarters . . .	as in item	21 (i)	3,763	These will usually be attached to family quarters for the battery.		
	(iv) <i>For R. F. A. ammunition column</i>						
	Block of 4 class B quarters . . .	as in item	21 (i)	6,285	Ditto ditto.		
	(a) Cook-houses . . .	as in item	21	(i) (a)			
	(b) Latrines . . .	see para	28				

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
70	<p>QUARTERS FOR STAFF SERJEANTS AND SERJEANTS—<i>conold.</i> (v) <i>For a Howitzer battery.</i></p> <p>Block of 6 class B quarters . . . . . as in item 21 (i)</p> <p>(a) Cook-houses . . . . . as in item 21 (i) (a)</p> <p>(b) Latrines . . . . . see para 28</p> <p>(vi) <i>For a Howitzer brigade ammunition column</i></p> <p>One block of 4 class B quarters . . . . . as in item 21 (i)</p> <p>(a) Cook-houses . . . . . as in item 21 (i) (a)</p> <p>(i) Latrine . . . . . see para 28</p> <p>(vii) <i>For a heavy battery</i></p> <p>Block of 6 class B quarters . . . . . as in item 21 (i)</p> <p>(a) Cook-houses . . . . . as in item 21 (i) (a)</p> <p>(b) Latrine . . . . . see para 28</p> <p>(viii) <i>For a company, R. G. A.</i></p> <p>Block of 3 class B quarters . . . . . as in item 21 (i)</p> <p>(a) Cook-houses . . . . . as in item 21 (i) (a)</p> <p>(b) Latrine . . . . . see para 28</p> <p>(ix) <i>For a British mountain battery. In the hills.</i></p> <p>One block of 5 class B quarters . . . . . as in item 21 (ii)</p> <p>(a) Cook-houses . . . . . as in item 21 (ii) (a)</p> <p>(b) Latrines . . . . . see para 28</p>	Ft.	Ft.	Ft.	Sq. ft.	<p>There are 2 staff serjeants, 7 serjeants, and 1 carriage artificer, of whom 56 per cent. or 6 are to be provided with family quarters. The remainder will be accommodated in the 3 quarters at the end of the single men's barracks and in the institute quarters.</p> <p>There are 2 staff serjeants and 4 serjeants, of whom 2 will occupy the quarters at the end of the single men's barracks.</p> <p>.....</p> <p>There are 2 staff serjeants and 8 serjeants, of whom 56 per cent. or 6 are to be provided with family quarters. The remainder will occupy the 3 quarters at the end of the single men's barracks and the institute quarters.</p> <p>There are 2 staff serjeants and 4 serjeants, of whom 56 per cent. or 3 will be provided with family quarters, the others will occupy the 2 quarters at the end of the single men's barracks and the institute quarters.</p> <p>There are 2 staff serjeants and 7 serjeants, of whom 56 per cent. are to be provided with family quarters, say 6 quarters; there are quarters for 3 serjeants at the end of the single men's barracks and 1 serjeant will be accommodated in the institute.</p>	
71	<p>QUARTERS FOR WARRANT OFFICERS AND STAFF SERJEANTS, R. A. STAFF.</p> <p>For classes of quarters authorised, see items 19 and 20</p>					<p>For list of members of the R. A. staff, see A. T.</p> <p>A schoolmaster and schoolmistress are allowed to a R. A. command of two or more batteries or companies.</p>	
72	<p>QUARTERS FOR INDIAN ESTABLISHMENT.</p> <p><i>For a British mountain battery in the hills</i></p> <p>In blocks as convenient—</p> <p>Fighting men—</p> <p>Each married man . . . . . 10 10 12</p> <p>Each single havildar . . . . . 8 10 12</p> <p>Each single man . . . . . 5 10 1</p> <p>Followers—</p> <p>Each married man . . . . . 8 10 9</p> <p>Each single man . . . . . 4 10 9</p>					<p>The establishment to be provided for is—</p> <p>Drivers (fighting men)—</p> <p>Havildar Major . . . . . 1</p> <p>Havildars and saluts . . . . . 5</p> <p>Naiks, drivers and artificers . . . . . 191</p> <p>Followers—</p> <p>Indian artificers, etc. . . . . 18</p> <p>TOTAL . . . . . 215</p>	1 hut- tel camp. 10 hut- tel camp.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. ft.		
72	<p>QUARTERS FOR INDIAN ESTABLISHMENT—<i>contd.</i>  <i>For a British mountain battery in the hills—</i>  <i>concl.</i>            (a) Cooking sheds (open)            about 9 sq. ft. per man</p>					<p>The total cost of this accommodation is not to exceed R12,000, and the number of quarters for married men is to be reduced to effect this. Planking under the iron roof is unnecessary unless the huts are to be occupied in winter. No scale is laid down, but the G. of I. will consider each case on its merits.</p>	
73	<p>BLACKSMITHS' FORGE AND SHOEING SHED.  <i>In the plains.</i>            (i) Battery, R.H.A., R.F.A., or R.H.A. ammunition column, a howitzer battery or a howitzer brigade ammunition column.            Forge . . . . .            Store-room . . . . .            Shoeing-shed . . . . .            (ii) Heavy battery, R.G.A. . . . .            (iii) R.F.A. ammunition column—            Forge . . . . .            Store-room . . . . .            2 shoeing sheds, each . . . . .  <i>In the hills.</i>            (iv) British mountain battery.            Forge . . . . .            Store-room . . . . .            Shoeing-shed . . . . .</p>	<p>30 20 41</p>	<p>20 8½ 15</p>	<p>16 16 10</p>	<p>1,820 1,600 2,410 1,070</p>	<p>See para 41 But shoeing-shed is 10' broad instead of 15'. To hold 2 forges See para 41 Hut but type with 9' verandah centrally situated as regards the stables.</p>	<p>9 B. C. modified.      9 B. C. modified.   86 I. M. B.</p>
74	<p>CARPENTERS' AND COLLAR-MAKERS' WORKSHOPS  <i>In the plains.</i>            (i) Battery, R.H.A., R.F.A., R.F.A. ammunition column, howitzer battery or howitzer brigade ammunition column—            Carpenters' shop . . . . .            Collar-makers' shop . . . . .            (d) Urinary—            1 compartment . . . . .            (ii) R.H.A. ammunition column—            Carpenters' shop . . . . .            Collar-maker's shop . . . . .            (d) Urinary . . . . .            (iii) Heavy battery, R.G.A.—            Carpenters' shop . . . . .            Collar-maker's shop . . . . .</p>	<p>30 30 6½ 20 20 as 27 27</p>	<p>20 20 2½ 20 20 in 20 20</p>	<p>16 16 7 16 16 (c) 16 16</p>	<p>3,160 28 1,985 23 2,170</p>	<p>Not to be provided if a latrine or urinary exists near.  See remarks above.</p>	<p>33 B. L.</p>

Item No.	Buildings	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
74	CARPENTERS' AND COLLAR-MAKERS' WORKSHOPS—concl'd.	Ft.	Ft.	Ft.	Sq. ft.		
	(d) Urinary . . . . . In the hills	22	12	11	28	See remarks above	
	(iv) British mountain battery						
	Carpenters' shop . . . . .	20	20	10	1,460	Hill hot type with 9' verandah.	85 I.M.B. modified.
	Collar-makers' shop . . . . .	20	20	10			
	(d) Urinary . . . . .	22	12	11	16	See remarks above.	
75	RECREATION GROUND	see para.		61			
76	DRY EARTH SHED . . . . .	10	10	8	180	For five months' supply, but	
77	FIRE ENGINE SHED . . . . .	see item		28		see para 31.	
78	FIVES COURT . . . . .	see item		29			
79	GUN-SHED In the plains.						
	(i) Battery, R. H. A. or R. F. A. on higher establishment—						
	Gun-shed . . . . .	92	46	10	5,580	Provides for 20 carriages parked 2 deep.	24 C. R.A.
	Store-room . . . . .	12	47	9			
	(ii) Battery, R. H. A. or R. F. A. on lower establishment—						
	Gun-shed . . . . .	65	46	10	4,196	Provides for 14 carriages parked 2 deep	24 C. R.A. modified.
	Store-room . . . . .	12	47	9			
	(iii) E. H. A. ammunition column—						
	Gun-shed . . . . .	83	40	10	4,519	For 17 carriages parked 2 deep	24 C. R.A. modified.
	Store-room . . . . .	12	47	9			
	(iv) R. F. A. ammunition column—						
	3 gun-sheds, each . . . . .	92	40	10	14,610	Each for 20 carriages parked 2 deep	Ditto.
	1 store-room . . . . .	12	40	10			
	2 store-rooms, each . . . . .	12	41	9			
	(v) Howitzer battery—						
	Gun shed (10 bays) . . . . .	92	47	10	5,670	The number of carriages is 19	Ditto.
	Gun park store-room . . . . .	12	48	10			
	(vi) Howitzer ammunition column—						
	Gun-shed (12 bays) . . . . .	110	47	10	6,600	The number of carriages is 30	Ditto
	Gun park store-room . . . . .	12	48	10			
	(vii) Heavy battery, R. G. A.						
	Gun-shed . . . . .	106	50	10	6,900	Verandah 10' wide in the clear in front, and not lower in height than 6' 8". Low movable wooden frames to be given for the ammunition boxes to rest on Racks for side arms, entrenching tools, etc., to be fixed to the rear and side walls. Sliding doors to be given. Small ground ventilators in the walls.	24 D & E. R. A. 24 A & B. R. A.
	Gun park store-room . . . . .	12	52	10			
	(viii) British mountain battery—						
	Gun-shed . . . . .	48	24	10	1,963		
80	GYMNASIUM . . . . .	see item		30			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
81	<b>HARNESS ROOMS—</b> <i>In the plains.</i> (i) <i>Battery, R. H. A. Higher establishment—</i> 2 harness rooms, each . . . 1 harness room . . . 2 store-rooms, each . . . <i>Lower establishment—</i> 2 harness rooms, each . . . 1 harness room . . . 2 store-rooms, each . . . (ii) <i>Battery, R. F. A., higher establishment—</i> <i>Lower establishment—</i> 2 harness rooms, each . . . 1 harness room . . . 2 store-rooms, each . . . (iii) <i>R H A ammunition column—</i> 1 harness room . . . 1 " " . . . 1 store-room . . . (iv) <i>R F A ammunition column—</i> 3 harness rooms, each . . . 2 store rooms, each . . . (v) <i>Howitzer battery—</i> 2 harness rooms, each . . . 1 harness room . . . 2 store-rooms, each . . . (vi) <i>Howitzer brigade ammunition column—</i> 2 harness rooms, each . . . 1 harness room . . . 2 store-rooms, each . . . <i>In the hills</i> (vii) <i>British mountain battery—</i> 3 harness rooms, each . . . 2 store-rooms, each . . .	Ft.	Ft.	Ft.	Sq. ft.		
		42	18	16	6,140	9' verandah in front and back. Are not to be provided in the lower rooms of double storied barracks. For design of saddle racks and harness pegs see type plan 29 B. One room for each section . . .	29 A. R. A.
		40	18	16			
		18	12	16			
		34	18	16	5,120	One room for each section . . .	29 A. R. A. modified.
		30	18	16			
		18	12	16			
		as	in	(v)	<i>Lower establishment</i> . . .		29 A. R. A.
		23	18	16	3,840	One room for each section . . .	29 A. R. A. modified.
		19	18	16			
		18	12	16			
		30	18	16	2,760	One room for each section . . .	29 A. R. A. modified.
		23	18	16			
		18	12	16			
		58	18	16	8,690	One room for each section . . .	29 A. R. A. modified.
		18	12	16			
		32	18	16	4,970	One room for each section . . .	29 A. R. A. modified.
		30	18	16			
		18	12	16			
		40	18	16	6,060	One room for each section . . .	29 A. R. A. modified.
		42	18	16			
		18	12	16			
		34	18	10	5,280	One room for each section . . .	29 A. R. A. modified.
		18	12	10			
82	<b>INSTITUTE</b> <i>In the plains</i> (i) <i>Battery, R. H. A. or R. F. A., a heavy battery or a company of R. G. A.—</i> Liquor bar portion— Privates' room . . . Bar and issue room . . . Beer store . . . Corporals' room . . . (b) <i>Latrine—</i> Privy of 1 seat . . . (d) <i>Urinary—</i> 1 compartment . . . (ii) <i>Howitzer battery—</i> Liquor bar portion— Privates' room . . . Bar and issue room . . . Beer store . . . Corporals' room . . . Subsidiary buildings . . .						
		14	24	16	2,920	The authorized area, exclusive of space taken up in verandahs, is 786 sq. ft.  For other portions of the institute see item 31  Not to be given when there is a barrack latrine near.	21 R. R. A. modified.
		20	12	16			
		20	10	16			
		4	3	.	40		
		6	2	7	29		132 B. I. 133 B. I.
		18	24	16	3,310		3 A. R. A. modified.
		12	24	16			
		10	24	16			
		as in item (i)		(i)			



Item No.	Buildings.	Length.	Breadth	Height	Plot area, approximate.	Remarks.	Type plan and walls
82	INSTITUTE—concl'd.	Ft.	Ft.	Ft.	Sq. ft.		
	(iii) 2 batteries, R. H. A. or R. F. A., or 2 companies, R. G. A.—						
	Liquor bar portion—						
	Privates' room . . . . .	23	24	16	3,700	The authorized area, exclusive of space taken up in verandahs, is 1,176 sq. ft.	21 A. R. A. modified.
	Bar and issue room } . . . . .	14	24	16			
	Beer store } . . . . .	12	24	16			
	Corporals' room . . . . .						
	(iv) 3 batteries, R. H. A. or R. F. A., 3 companies, R. G. A., or 2 howitzer batteries with or without the howitzer brigade ammunition column.						
	Liquor bar portion—						
	Privates' room . . . . .	27	24	16	4,700	The authorized area, exclusive of the space taken up in verandahs, is 1,834 sq. ft.	21 A. R. A. modified.
	Bar and issue room and beer store . . . . .	10	24	16			
	Corporals' room . . . . .	24	24	16			
	Sergeant's quarter . . . . .	as in item 22					
	(b) Latrine . . . . .	as in (i)		...		See remarks against (i) (b).	
	(d) Urinary . . . . .	as in (i)		...			
	(v) 4 batteries, R. H. A. or R. F. A., or 4 companies, R. G. A.—						
	Liquor bar portion—						
	Privates' room . . . . .	30	24	16	6,720	The authorized area, exclusive of space taken up in verandahs, is 2,320 sq. ft.	21 A. R. A. modified.
	Bar and issue room . . . . .	10	24	16			
	Beer store . . . . .	16	24	16			
	Corporals' room . . . . .	24	24	16			
	Sergeant's quarter . . . . .	as in item 22					
	Theatre . . . . .	50	24	16			
	(b) Latrine . . . . .	as in (i)		...			
	(d) Urinary—						
	2 compartments . . . . .	6½	5	7	43		133 B. I.
	In the hills						
	(vi) British mountain battery.						
	Liquor bar portion—						
	Privates' room . . . . .	12	20	10	1,505	The authorized area, exclusive of space taken up in verandahs, is 578 sq. ft.	1 hutted camp modified.
	Bar and issue room . . . . .	18	10	10			
	Beer store . . . . .	18	8½	10			
	Corporals' room . . . . .	as in item 22					
	Subsidiary buildings . . . . .						
81A	LAUNDRY STORE. In the plains						
	(i) For a battery, R. H. A. or R. F. A. heavy battery or a company, R. G. A.						
	1 dirty clothing room . . . . .	15	13	13½	605	.....	74 B. I.
	1 making up room . . . . .	20	13	13½			
	In the hills.						
	(ii) For a British mountain battery.						
	Laundry store . . . . .	as in item (i)			605		



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks	Type plan and series.
87	<p>QUARTER GUARD AND DETENTION ROOMS <i>In the plains.</i></p> <p>(i) <i>Battery or company, R. A.</i></p> <p>Guard room for 7 men</p> <p>Guard detention room for 6 men</p> <p>3 barrack detention rooms, each</p> <p>(b) Latrine— of 2 seats (1 for guard and 1 for soldiers under sentence)</p> <p>2 compartments, each</p> <p>Covered passage for sentry.</p> <p>(c) Lavatories— 1 room for 6 basins</p> <p>2 private bath-rooms</p> <p>(d) Urinary— 1 compartment</p> <p><i>In the hills.</i></p> <p>(i) <i>British mountain battery.</i></p> <p>Guard room for 7 men.</p> <p>Guard detention room for 6 men</p> <p>3 barrack detention rooms, each.</p> <p>(b) Latrine— of 2 compartments of 1 seat each</p> <p>Covered passage for sentry</p> <p>(c) Lavatories— 1 room for 4 basins</p> <p>1 private bath-room</p> <p>(d) Urinary</p>	<p>Ft.</p> <p>30</p> <p>22½</p> <p>13</p> <p>12</p> <p>5</p> <p>16</p> <p>6½</p> <p>6½</p> <p>24</p> <p>18</p> <p>10</p> <p>2½</p> <p>4</p> <p>5½</p> <p>5½</p> <p>as</p> <p>24</p> <p>29</p> <p>24</p> <p>24</p> <p>24</p> <p>13</p> <p>6½</p> <p>20</p> <p>20</p> <p>20</p> <p>20</p> <p>13</p> <p>as</p>	<p>Ft.</p> <p>21</p> <p>21</p> <p>10</p> <p>2½</p> <p>5</p> <p>9</p> <p>6½</p> <p>2½</p> <p>20</p> <p>20</p> <p>10</p> <p>8½</p> <p>4½</p> <p>14</p> <p>4½</p> <p>in</p> <p>24</p> <p>21</p> <p>15</p> <p>10</p> <p>8½</p> <p>2½</p> <p>20</p> <p>12</p> <p>10</p> <p>8½</p> <p>in</p>	<p>Ft.</p> <p>16</p> <p>16</p> <p>16½</p> <p>9</p> <p>9</p> <p>9</p> <p>7</p> <p>10</p> <p>10</p> <p>13</p> <p>7</p> <p>7</p> <p>8</p> <p>8</p> <p>(i)</p> <p>11</p> <p>11</p> <p>11</p> <p>11</p> <p>9</p> <p>7</p> <p>11</p> <p>11</p> <p>11</p> <p>0</p> <p>(i)</p>	<p>Sq. Ft.</p> <p>3,750</p> <p>1,800</p> <p>180</p> <p>360</p> <p>28</p> <p>1,530</p> <p>770</p> <p>134</p> <p>182</p> <p>28</p> <p>690</p> <p>2,540</p> <p>23</p> <p>23</p> <p>2,000</p> <p>23</p>	<p>For two batteries the accommodation may be rather less in proportion.</p> <p>For a howitzer battery the guard detention room should be 30' x 24' for 8 men, and 4 barrack detention rooms should be given.</p> <p>For 2 howitzer batteries and the brigade ammunition column the accommodation would be the same as for a detached wing of British infantry</p> <p>Hill hut type with 9 verandah in front.</p> <p>This store-room should be attached to the store-rooms for the R. A. located at the same station.</p> <p>The store-room in the gun-shed is intended for gun stores only, and is quite separate from the quartermaster's store.</p> <p>Not to be provided if a latrine or urinary exists conveniently near.</p> <p>See remarks against (i)</p>	<p>64A to 64D } R. I. modified.</p> <p>64 B B I. modified.</p> <p>64 B. B. I. modified.</p> <p>133 B I.</p> <p>64 B B I. modified.</p> <p>64 B. B. I. modified.</p> <p>CS B I. modified.</p> <p>133 B. I.</p> <p>CS B I. modified.</p>
88	<p>QUARTERMASTER'S STORES. <i>In the plains.</i></p> <p>(i) <i>R. A. Hd Qrs.</i></p> <p>Store-room</p> <p>(ii) <i>Battery, R. H. A. or R. F. A., a howitzer battery, or howitzer brigade ammunition column</i></p> <p>Store-room</p> <p>Tailors' shop</p> <p>Quartermaster's office</p> <p>Dry store</p> <p>(d) Urinary</p> <p>1 compartment</p> <p>(iii) <i>R. H. A. ammunition column.</i></p> <p>Store-room</p> <p>Tailors' shop</p> <p>Quartermaster's office</p> <p>Dry store</p> <p>(d) Urinary</p>	<p>24</p> <p>29</p> <p>24</p> <p>24</p> <p>24</p> <p>13</p> <p>6½</p> <p>20</p> <p>20</p> <p>20</p> <p>20</p> <p>13</p> <p>as</p>	<p>24</p> <p>21</p> <p>15</p> <p>10</p> <p>8½</p> <p>2½</p> <p>20</p> <p>20</p> <p>20</p> <p>20</p> <p>13</p> <p>as</p>	<p>11</p> <p>11</p> <p>11</p> <p>11</p> <p>9</p> <p>7</p> <p>11</p> <p>11</p> <p>11</p> <p>11</p> <p>0</p> <p>(i)</p>	<p>690</p> <p>2,540</p> <p>23</p> <p>23</p> <p>2,000</p> <p>23</p>	<p>This store-room should be attached to the store-rooms for the R. A. located at the same station.</p> <p>The store-room in the gun-shed is intended for gun stores only, and is quite separate from the quartermaster's store.</p> <p>Not to be provided if a latrine or urinary exists conveniently near.</p> <p>See remarks against (i)</p>	<p>CS B I. modified.</p> <p>133 B. I.</p> <p>CS B I. modified.</p>

Item No.	Buildings	Length.	Breadth.	Height.	Plinth area, approximate	Remarks	Type plan and series
		Ft.	Ft.	Ft.	Sq Ft		
88	QUARTERMASTER'S STORES— <i>conold.</i>						
	(iv) R. F. A. ammunition column.						
	Store-room . . .	53	24	11	3,440	See remarks against (iv).	68 B. I. modified.
	Tailors' shop . . .	24	15	11			
	Quartermaster's office . . .	24	10	11			
	Dry store . . .	13	8½	9			
	(d) Urinary . . .	as	in	(vi)	23		
	(e) Heavy battery or company, R. G. A.						
	Store-room . . .	24	22	11	2,840	See remarks	68 B. I. modified.
	Tailors' shop . . .	24	15	11			
	Quartermaster's office . . .	24	10	11			
	Dry store . . .	13	8½	9			
	(d) Urinary . . .	as	in	(vi)	23		
	<i>In the hills.</i>						
	(vi) British mountain battery.						
	1 store-room . . .	24	20	10	2,430	Hill hut type	
	1 " " . . .	21	20	10			
	Tent store . . .	20	20	10			
	Quartermaster's office . . .	10	20	10			
	Tailors' shop . . .	10	20	10	28		
	Dry store . . .	10	20	10			
	(d) Urinary . . .	as	in	(vi)			
89	RANGES . . .	..	..	...	...	Stop butts are not necessary on artillery ranges. If any works should be found necessary, the orders of the G. of I. as to the incidence of east should be taken, if at all doubtful.	
90	RIDING SCHOOL <i>In the plains.</i>						
	(i) Battery, R. H. A. or R. F. A. or R. H. A. ammunition column, a howitzer battery, or a howitzer brigade ammunition column.						
	One manège . . .	...	..	...	...	See para 48 A.	37 R. A.
	(ii) R. F. A. ammunition column.						
	Two manèges, each . . .	..	...	..	..	See remarks against (i).	37 R. A. and 37 A. R. A.
91	SCHOOLS. <i>In the plains</i>						
	(i) Battery, R. H. A. or R. F. A., or heavy battery, R. G. A.						
	Class room for 32 men . . .	26	24	16	2,910	See para 41 10 verandah on two sides and at one end. For a R. F. A. ammunition column in addition, the battery school should be enlarged to provide for 10 men and 6 children of the column. No additional accommodation is required for a R. H. A. ammunition column.	71 C. B. I.
	" " " 20 children . . .	18	24	16			
	2 water-rooms, each . . .	10	6	11			
	(b) Latrine—						
	Privy for boys . . .	10½	5½	9	260		71 E. B. I.
	" " girls . . .	10½	5½	9			
	Urinary for boys . . .	4½	3½				
	Dry earth shed . . .	4½	3½				

Item No.	Buildings	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
93	STABLES— <i>contd</i>	Ft	Ft.	Ft.	Sq. Ft.		
	(i) <i>Battery, R. H. A. on higher establishment—contd</i>						
	Two stables each for 54 horses—						
	6 compartments, each for 9 horses, each	72	14	}	8,615		
	Central passage	221	5				
	(d) 4 urinaries of 2 compartments, each	64	5	7	48	One for each set of stables.	133 B.I. modified.
	(ii) <i>Battery, R. H. A. on lower establishment.</i>						
	Two stables each for 56 horses	as	in	(i)	8,930	The number of horses is 164	
	One stable for 52 horses						18 B.C. modified.
	4 compartments, each for 9 horses, each	72	14	}	8,300		
	2 compartments, each for 8 horses, each	64	14				
	Central passage	218	5				
	(d) 3 urinaries	as	in	(i)	48	One for each set of stables.	133 B.I.
	(iii) <i>Battery, R. F. A. on higher establishment</i>						
	Three stables each for 56 horses	as	in	(i)	8,930	The number of horses is 163	
	(d) 3 urinaries	as	in	(i)	48	One for each set of stables	133 B.I.
	(iv) <i>Battery, R. F. A. on lower establishment.</i>						
	Two stables each for 58 horses—						
	2 compartments, each for 9 horses, each	72	14	}	9,210		18 B.C. modified.
	4 compartments, each for 10 horses, each	80	14				
	Central passage	237	5				
	(d) 2 urinaries	as	in	(i)	48	One for each set of stables.	133 B.I.
	(v) <i>R. H. A. ammunition column.</i>						
	One stable for 53 horses.	as	in	(ii)	8,300	The number of horses is 101.	
	One stable for 50 horses—						18 B.C. modified.
	4 compartments, each for 8 horses, each	64	14	}	7,000		
	2 compartments, each for 9 horses, each	72	14				
	Central passage	205	5				
	(d) 2 urinaries	as	in	(i)	48	One for each set of stables.	13 B.I.
	(vi) <i>R. F. A. ammunition column.</i>						
	Six stables for 53 horses, each	as	in	(iv)	9,210	The number of horses is 319.	18 B.C. modified.
	(d) 6 urinaries	as	in	(i)	48	One for each set of stables.	133 B.I.
	(vii) <i>Howitzer Battery.</i>						
	Three stables each for 56 horses	as	in	(i)	8,930	The number of horses is 167.	18 B.C. modified.
	(d) 3 urinaries	as	in	(i)	48	One for each set of stables	133 B.I.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area approximate	Remarks.	Type plan and series.
93	<p>STABLES—<i>conold</i> (vii) <i>Howitzer brigade</i> <i>ammunition column.</i> Three stables each for 60 horses— 6 compartments, each for 10 horses, each . . . 80 Central passage . . . 245 One stable for 58 horses . . . 22 (d) 4 urinals . . . 22</p> <p>(ix) <i>Heavy battery</i> (fully horsed) One stable for 68 horses— 4 compartments, each for 12 horses, each . . . 96 2 compartments, each for 10 horses, each . . . 80 Central passage . . . 277 One stable for 66 horses— 4 compartments, each for 12 horses, each . . . 96 2 compartments, each for 9 horses, each . . . 72 Central passage . . . 269 (d) 2 urinals . . . 22</p>	Ft.	Ft.	Ft.	Sq. ft.	<p>The number of horses is 238.</p> <p>One for each set of stables.</p> <p>The number of horses is 133.</p> <p>One for each set of stables.</p>	<p>18 P.C. modified</p> <p>133 B. I.</p> <p>18 B. C. modified.</p> <p>Do.</p> <p>133 B. I.</p>
94	<p>KAHAR'S HUT. For a battery or company, R. A.— Hut for 4 kahars . . . 20</p>	12	10		360	To be built near the quarter guard.	
95	VETERINARY HOSPITAL	see item	33			They will usually be required for drinking water and cook-houses, for the lavatories and the soldiers' gardens; and for the stables, a trough being attached.	3 Misc.
96	WELLS . . . . .	as required					
97	<p>BRITISH INFANTRY IN THE PLAINS.</p> <p>BARRACKS FOR SINGLE BAND AND FILE. (i) <i>For a battalion</i> 7 barracks each containing— 1 sergeant's quarter . . . 23 58 men { 1 dormitory for 16 men . . . 6           { 3 dormitories for 14 men, each . . . 52 1 store room . . . 9 1 barracks as above but with 2 sergeants' quarters, instead of one 9 barracks each containing— 2 sergeants' quarters . . . 22 56 { 4 dormitories for 14 men, each . . . 52 men. { each . . . 52 1 store room . . . 9</p>	as in item	23		12,770	<p>The rank and file number 956 of whom married men 12 band . . . 20 drummers . . . 16 leaving 908 to be accommodated in single men's barracks; the best arrangement is eight . . . . .</p> <p>a half company barrack. As the band consists of 1 sergeant, 20 men and 16 drummers, the accommodation given allows room for band practice. In Highland regiments 1 sergeant piper and 5 pipers are additional to the band</p>	G A to I.
		as in item	22		13,620		
		as in item	22		13,330		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks	Type plan and series.
97	BARRACKS FOR SINGLE RANK AND FILE— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(a) 4 combined dining halls and kitchens, each containing—					One for two companies.	
	227 { 2 rooms for 114 men, each . . .	66½	2½	16	9,540	With 10' verandah on 3 sides.	119 B. I.
	1 kitchen . . .	30	18	13		With 7' verandah in front containing 2 fuel stores each 6' x 2½'.	
	2 sculleries, each . . .	18½	8	13			
	2 cooks' rooms, each . . .	8	8	8			
	2 meat stores, each . . .	10	8	8		For the band.	
	1 combined dining hall and kitchen containing—						
	1 room for 36 men . . .	21	2½	16	2,600	With 10' verandah on 3 sides	
	1 kitchen . . .	15	1½	13		With 7' verandah in front containing 1 fuel store 6½' x 2½'.	119 B. I. modified.
	1 scullery . . .	18½	8	13			
	1 cook's room . . .	8	8	8			
	1 meat store . . .	10	8	8			
	(b) Latrines 8, each containing—						
	Privy of 8 seats . . .	21½	12	9	610	One for each company.	132 B. I.
	Cart-shed . . .	11	8	7			
	Sweeper's room . . .	8	6	7½			
	Dry earth shed . . .	5½	4	4½			
	One latrine—						
	Privy of 1 seat . . .	11	12	9	200	For the band barrack.	132 B. I. modified.
	(c) Lavatories 8, each containing—						
	Room for 20 basins	30	18	9	1,120	One for each company.	133 B. I.
	8 private bath-rooms	6½	5	9			
	One lavatory—						
	Room for 10 basins	15	10	9	600	For the band barrack.	133 B. I. modified.
	4 private bath-rooms	6½	5	9			
	(d) Urinaries, 17—						
	Of 3 compartments, each . . .	6½	5	7	43	One for each half company barrack and for the band barrack, they may be combined, if convenient	133 B. I.
	(ii) For a head-quarter wing.						
	Band barrack containing—					The strength of a head-quarter wing in rank and file is 53½, of whom married men number 7, band 20, drummers 8-35, leaving single men 49½; allow 8 half company barracks for 62 each, and 1 for the band for 48 men.	3 A. to I. B. I. modified.
	1 sergeant's quarter . . . as in item			22	10,880		
	43 { 3 dormitories for men { 16 men, each . . .	60	2½	16			
	1 store-room . . .	9½	9	9½			
	5 barracks, each containing—						
	2 sergeant's quarters . . . as in item			22	14,120		3 A. to I. B. I. modified.
	62 { 3 dormitories for men { 16 men, each . . .	60	2½	16			
	1 dormitory for 16 men . . .	62½	2½	16			
	1 store-room . . .	9½	9	9½			
	5 barracks, each containing—						
	1 sergeant's quarter . . . as in item			22	13,600		1 A. to I. B. I. modified.
	Dormitories for 62 men—	as above					

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
97	BARRACKS FOR SINGLE RANK AND FILE— <i>conold.</i>						
	(a) 2 combined dining halls and kitchens, each containing—					Each for 2 companies.	
	248 { 2 rooms for 124 men { men, each . . . 72½	24	16	} 10,110	}	With 10' verandah on 3 sides.	110 B. I. modified.
	1 kitchen . . . 30	18	13			With 7' verandah in front containing 2 fuel stores, each 6½' x 2½'.	
	2 sculleries, each . . . 18½	8	13				
	2 cooks' rooms, each . . . 8	8	8				
	2 meat stores, each . . . 10	8	8			For band barrack.	
	1 combined dining hall and kitchen containing—						
	1 room for 28 men . . . 16½	24	16	} 2,380	}	With 10' verandah on 3 sides.	110 B. I. modified.
	1 kitchen . . . 15	18	13			With 7' verandah in front containing 1 fuel store 6½' x 2½'.	
	1 scullery . . . 18½	8	13				
	1 cook's room . . . 8	8	8				
	1 meat store . . . 10	8	8				
	(b) Latrines, 4 of 8 seats, and 1 of 4 seats . . . as in (c)				640	One for each company.	132 B. I.
	(c) Lavatories, 4 large and 1 small . . . as in (c)				200	For the band	
	(d) Urinaries, 4 large and 1 small . . . as in (c)				1,120	One for each company.	138 B. I.
	(e) Urinaries, 9 . . . as in (c)				600	For the band.	
	(ii) For the detached wing.				48	See remarks against (c) (d).	133 B. I.
	4 barracks each containing—					The strength of a detached wing is 422 rank and file, of whom five are married leaving 417 single men; this gives 8 barracks for 53 men each.	
	1 sergeant's quarter . . . as in item 22						
	52 men { 2 dormitories for 14 men, each . . . 52½	24	16	} 11,680	}		6 A. to L. B. I. modified.
	2 dormitories for 12 men, each . . . 45	24	16				
	4 barracks containing—						
	2 sergeants' quarters . . . as in item 22						
	Dormitories for 52 men . . . as above				12,600		
	(a) 2 combined dining halls and kitchens, each containing—					Each for 2 companies.	
	208 { 2 rooms for 104 men { men, each . . . 60½	24	16	} 8,975	}	With 10' verandah on 3 sides.	110 B. I. modified.
	1 kitchen . . . 30	18	13			With 7' verandah in front containing 2 fuel stores, each 6½' x 2½'.	
	2 sculleries, each . . . 18½	8	13				
	2 cooks' rooms, each . . . 8	8	8				
	2 meat stores, each . . . 10	8	8				
	(b) Latrines, 4 of 8 seats . . . as in (c)				640	One for each company.	132 B. I.
	(c) Lavatories, 4 large . . . as in (c)				1,120	Ditto.	138 B. I.
	(d) Urinaries, 8 . . . as in (c)				48	See remarks against (c) (d)	133 B. I.
98	BARRACKS FOR MARINED RANK AND FILE						
	(i) For a Battalion—						
	One block of 12 class B quarters . . . as in item 21 (c)	21	7		16,353	The family quarters to be provided are $\frac{125 \times 954}{100}$ , say 12 quarters.	
	(a) Cook-houses . . . as in item 21 (c) (a)						
	(b) Latrines—	see para.	23				
	(d) Urinaries, 2—						
	1 compartment, each . . . 6½	2½	7		23	One for each block.	132 B. I. modified. 133 B. I.



Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate.	Remarks.	Type, plan and series.
98	BARRACKS FOR MARRIED RANK AND FILE— <i>concl'd.</i>	Ft.	Ft.	Ft.	Sq. Ft.		
	(i) For a head-quarter wing. One block of 7 class B quarters . . . . .	as in item	21	(i)	10,033	The family quarters to be provided are $\frac{125 \times 534}{100}$ say 7 quarters.	
	(a) Cook-houses . . . . .	as in item	21	(i)	(a)		
	(b) Latrines— (d) Urinaries, 2— 1 compartment, each . . . . .	see para.	23		28	For the two blocks. One for each block.	132 B. I. modified. 133 B. I.
	(ii) For a detached wing. One block of 5 class B quarters . . . . .	as in item	21	(i)	7,566	The family quarters to be provided are $\frac{125 \times 422}{100}$ say 5 quarters.	
	(a) Cook-house—	as in item	21	(i)	(a)		
	(b) Latrines— (d) Urinary— 1 compartment . . . . .	see para.	23		28		132 B. I. modified. 133 B. I.
99	WARRANT OFFICERS' QUARTERS For a battalion or a head-quarter wing— 4 class D quarters with outhouses . . . . .	as in item	19		2,820	1 for the sergeant-major. 1 " " bandmaster. 1 " " schoolmaster. 1 " " schoolmistress.	
100	QUARTERS FOR STAFF SERJEANTS AND SERJEANTS. (i) For a battalion— One block containing— 1 class A and 8 class B quarters . . . . .	as in items (i) and 21	20	(i)	113,045	The number of staff serjeants and serjeants is 48, of whom 36 per cent. or 17 are to be provided with married quarters. Quarters are allowed for 27 serjeants in the ends of single men's barracks, and serjeants will also be accommodated in the officers' mess, the provost serjeant's, canteen serjeant's and caterer's quarters.	
	One block of 8 class B quarters . . . . .	as in item	21	(i)	11,319		
	(a) Cook-houses—	as in item	21	(i)	(a)		
	(b) Latrines—	see para.	23			Suitably placed for the 2 blocks.	132 B. I. modified.
	(ii) For a head-quarter wing. One block containing 1 class A, and 9 class B quarters . . . . .	as in items (i) and 21	20	(i)	14,323	The number of staff serjeants and serjeants is 28, of whom 36 per cent. or 10 are to be provided with married quarters. The remainder are allowed for in 14 quarters at the end of barracks, and in the special quarters detailed against a full battalion.	
	(a) Cook-house—	as in item	21	(i)	(a)		
	(b) Latrines—	see para.	23				132 B. I. modified.

Item No.	Buildings.	Length	Breadth	Height	Plinth area, approximate.	Remarks.	Type plan and series.
100	QUARTERS FOR STAFF SERJEANTS AND SERJEANTS— <i>concid.</i> (iii) For a detached wing. One block of 7 class B quarters . . . . .	Ft	Ft.	Ft.	Sq. Ft	The number of serjeants is 20, of whom 7 are to be provided with family quarters. The remainder will be accommodated in the 12 quarters at the end of barracks and 1 in the institute.	18 A. B. I. and 7 B. R. A.
	(a) Cook-house—	as in item	21	(i) (a)			
101	(b) Latrines— ARMOURERS' SHOP. For a battalion or a wing	see para	23				
	Armourers' shop . . . . .	30	24	16	2,180	See para. 45.	41 A to C. B. I.
	Forge room . . . . .	24	6½	16			
	Water and wood store . . . . .	10	10	10			
	Drying room . . . . .	10	10	10			
102	BLACKSMITHS' FORGE AND WORKSHOP, VOLUNTARY. For a battalion or a wing.						
	Forge . . . . .	23	22 or 24		900	See para. 44.	
103	RECREATION GROUND . . . . .	see para	51				
104	DRY EARTH STORE . . . . .	see para	31				
105	FIRE ENGINE SHED . . . . .	see item	28		420		48 B. I.
106	FIVES COURT . . . . .	see item	29		7,050		82 B. C.
107	GYMNASIUM . . . . .	see item	30				
108	INSTITUTE (i) For a battalion. Liquor bar portion— Privates' room . . . . .	50	24	16	7,280	The authorized floor area, exclusive of verandah space taken up, is 2,736 sq. ft.	44 B. I. modified.
	Bar or issue room . . . . .	10	24	16			
	Beer store . . . . .	19	24	16			
	Corporals' room . . . . .	21	24	16			
	Serjeant's quarter . . . . .	as in item	22				
	Theatre . . . . .	83½	24	16	5,250		
	(b) Latrine— Privy of 1 seat . . . . .	4	3	...	40		132 B. I.
	(d) Urinary— 2 compartments . . . . .	6½	5	7	48		133 B. I. modified.
	(ii) For the head-quarters and 6 companies of a battalion. Liquor bar portion— Privates' room . . . . .	37	24	16	6,160	The authorized floor area, exclusive of verandah space taken up, is 2,184 sq. ft.	44 B. I. modified.
	Bar or issue room . . . . .	10	24	16			
	Beer store . . . . .	19	24	16			
	Corporals' room . . . . .	14	24	16			
	Serjeant's quarter . . . . .	as in item	23				
	Theatre . . . . .	70	24	16			
	Subsidiary buildings . . . . .	as in (i)					
	(ii) For a head-quarter wing. Liquor bar portion— Privates' room . . . . .	23	24	16	5,480	The authorized floor area, exclusive of verandah space taken up, is 1,848 sq. ft.	44 B. I. modified.
	Bar or issue room . . . . .	10	24	16			
	Beer store . . . . .	16	24	16			
	Corporals' room . . . . .	12	24	16			
	Serjeant's quarter . . . . .	as in item	22				
	Theatre . . . . .	44	24	16			
	(b) Latrine . . . . .	as in item	(i)				
	(d) Urinary— 1 compartment . . . . .	6½	2½	7	28		B. I.

Item No.	Buildings	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
108	INSTITUTE— <i>condid.</i>	Ft.	Ft.	Ft.	Sq. ft.		
	(ib) For a detached wing.						
	Liquor bar portion—						
	Privates' room . . . . .	25	24	16	5,230	The authorized floor area, exclusive of verandah space taken up, is 1,728 sq. ft.	44 B. I. modified.
	Bar or issue room . . . . .	10	24	16			
	Beer store . . . . .	14	24	16			
	Corporals' room . . . . .	12	24	16			
	Sergeant's quarter . . . . .	as in item		22			
	(b) Latrine . . . . .	as in (i)					
	(d) Urinary . . . . .	as in (ii)					
	(e) For a detachment of 2 companies.						
	Liquor bar portion—						
	Privates' room . . . . .	20	24	16	3,240	The authorised floor area, exclusive of verandah space taken up, is 930 sq. ft.	44 B. I. modified.
	Bar or issue room . . . . .	20	12	16			
	Beer store . . . . .						
	Corporals' room . . . . .	20	10½	16			
	(b) Latrine . . . . .	as in (i)					
	(d) Urinary . . . . .	as in (ii)					
103A	LAUNDRY STORE.						
	(i) For a battalion.						
	1 dirty clothing room . . . . .	25	13	13½	918	.....	74 B. I.
	1 making up room . . . . .	30	13	13½			
	(ii) For less than a battalion, but not less than a company.						
	1 dirty clothing room . . . . .	18	13	13½	603	.....	74 B. I.
	1 making up room . . . . .	20	13	13½			
109	MAGAZINE.						
	(i) For a battalion.						
	S A. ammunition room . . . . .	16	16	16	480	See para. 47. This will usually be provided for in the central station magazine. If so, a small expense store to hold 60 boxes of ammunition will be provided in the lines.	
	(ii) For a wing.						
	S A. ammunition room . . . . .	16	10	16	340		
110	ORDERLY AND COURT-MARTIAL ROOM.						
	(i) For a battalion.						
	Orderly room . . . . .	24	20	16		Officer's room will only be given under special sanction.	45 B. I. modified.
	Court-martial room . . . . .	36	20	16			
	Bath-room in verandah . . . . .	9½	10	...			
	(d) Urinary—						
	1 compartment . . . . .	6½	2	7	16	Not to be provided if a latrine or urinary exists near.	
	(ii) For a wing.						
	Orderly room . . . . .	22	20	16		As against (i).	45 B. I. modified.
	Court-martial room . . . . .	36	20	16			
	Bath-room in verandah . . . . .	9½	10	...			
	(d) Urinary . . . . .	as in (i)			16	See remarks against (i) (d).	
111	PARADE GROUND . . . . .			laid down.			
112	PAY OFFICE.						
	(i) For a battalion.						
	1 room . . . . .	24	23½	16	1,300	Should be given under the same roof as the orderly room.	
	(ii) For a head-quarter wing.						
	1 room . . . . .	24	13½	16	1,030		47 B. I.
113	PRAYER ROOM . . . . .	see item		32			

[illegible]

Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate	Remarks.	Type plan and series.
115	QUARTERMASTER'S STORES—concl'd.	Ft.	Ft.	Ft.	Sq. ft.		
	(iii) For a detached wing. As in (i) but one store-room instead of three				2,670	See remarks against (i).	
116	(d) Urinary	as	in	(i)	28	See remarks against (i) (d).	
	REGIMENTAL WORKSHOPS, VOLUNTARY.						
	(i) For a battalion.						
	Carpenter's shop	50	22	16	7,780		69 B. I.
	" store-room	41	12	9			
	Painter's shop	22	22	16			
	Tinsmith's shop	22	14	16			
	Shoemaker's shop	22	22	16			
	Bookbinder's shop	14	10½	16			
	Watchmaker's shop	14	10½	16			
	Printer's shop	25	22	16			
	2 water-rooms, each	8	8	9			
	(d) Urinary—						
	2 compartments	6½	5	7	48	Not to be provided if a latrine or urinary exists near.	133 B. I.
	(ii) For a head-quarter wing						
	Carpenter's shop	33½	22	16	5,890		69 B. I. modified.
	" store-room	41	8	9			
	Painter's shop	14½	22	16			
	Tinsmith's shop	9½	22	16			
	Shoemaker's shop	14½	22	16			
	Bookbinder's shop	9½	10½	16			
	Watchmaker's shop	9½	10½	16			
	Printer's shop	16½	22	16			
	2 water-rooms, each	8	8	9			
	(d) Urinary—						
	1 compartment	6½	2½	7	28	As against (i) (d).	133 B. I.
	(iii) For a detached wing.						
	Carpenter's shop	30	24	16	5,460		69 B. I. modified.
	Painter's shop	12	24	16			
	Tinsmith's shop	12	24	16			
	Shoemaker's shop	12½	24	16			
	Bookbinder's shop	12	24	16			
	Printer's shop	14	12	16			
	Water-room	10	24	16			
	(d) Urinary	as	in	(i)	28	As against (i) (d).	
117	RIVLE RANGE	see	para	49			49 A to C B. I.
118	SCHOOL—						
	(i) For a battalion.						
	Class room for 120 men	92	24	16	7,630	See para. 41.	71 A B. I.
	Class room for 64 children	38	24	16			
	2 water-rooms, each	6	10	9½			
	Or with quarters for the schoolmaster and mistress attached				9,400	Subsidiary buildings for these quarters as laid down for class A sergeants.	
	(b) Latrine—						
	Privy for boys, 4 seats	11	10½	9	400		71 E. B. I.
	" " girls, 4 "	11	10½	9			
	Urinary for boys	4½	3½				
	Dry earth shed	4½	3½				
	(d) Urinary—						
	2 compartments	6½	5	7	48	For men.	133 B. I.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
118	SCHOOL— <i>contd.</i>	Ft.	Ft.	Ft.	Sq. ft.		
	(ii) For a battalion with 1 or 2 companies detached.						
	Class room for 96 men . . . . .	74	24	16	6,160	See remarks against (i).	71 B. B. I.
	Class room for 40 children . . . . .	24	24	16			
	2 water-rooms, each . . . . .	6	10	9½			
	Or with quarters for the schoolmaster and mistress attached . . . . .				7,920		
	Subsidiary buildings . . . . .	as	in	(4)			
	(iii) For a battalion with 3 companies detached or a head-quarter wing.						
	Class room for 80 men . . . . .	68	24	16	5,660	See remarks against (i).	71 B. B. I.
	" " " 36 children . . . . .	22	24	16			
	2 water-rooms, each . . . . .	6	10	9½			
	Or with quarters for the schoolmaster and mistress attached . . . . .				7,430		
	(b) Latrine—						
	Privy for boys, 3 seats . . . . .	8½	10½	9	330		71 E. B. I.
	" " girls, 3 . . . . .	8½	10½	9			
	Urinary for boys . . . . .	4½	3½				
	Dry earth shed . . . . .	4½	3½				
	(d) Urinary . . . . .	as	in	(1)	48	For men.	133 B. I.
	(iv) For a detached wing—						
	Class room for 64 men . . . . .	64	24	16	3,450		71 C. B. I.
	" " for 36 children . . . . .	22	24	16			
	2 water-rooms, each . . . . .	6	10	9½			
	Subsidiary buildings . . . . .	as	in	(iii)			
	(v) For 3 companies—						
	Class room for 48 men . . . . .	40	24	16	3,080		71 C. B. I.
	" " " 30 children . . . . .	22	24	16			
	2 water-rooms, each . . . . .	6	10	9½			
	(b) Latrine—						
	Privy for boys, 2 seats . . . . .	5½	10½	9	260		71 E. B. I.
	" " girls, 2 . . . . .	5½	10½	9			
	Urinary for boys . . . . .	4½	3½				
	Dry earth shed . . . . .	4½	3½				
	(d) Urinary—						
	1 compartment . . . . .	6½	2½	7	28	For men.	133 B. I.
	(vi) For 2 companies—						
	Class room for 32 men . . . . .	26	24	16	2,250		71 C. B. I.
	" " " 20 children . . . . .	24	18	16			
	2 water-rooms, each . . . . .	6	10	9½			
	Subsidiary buildings . . . . .	as	in	(c)			
	(vii) For 1 company—						
	Class-room for 16 men . . . . .	24	18	16	1,170		71 D. B. I.
	1 water-room . . . . .	6	10	9½			
	(d) Urinary . . . . .	as	in	(c)	28		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
119	<b>SERGEANTS' MESS.</b>	Ft.	Ft.	Ft.	Sq. ft.		
	(i) For a battalion.						
	Mess-room . . . . .	30	24	16	6,656	A 10' verandah in the clear all round, containing the beer store, caterer's quarter, pantry, and a lavatory 9½' x 12' near the ante-room.	67 B. I.
	Ante-room . . . . .	30	24	16			
	Billiard room . . . . .	30	24	16			
	Beer store . . . . .	24	9½	9½			
	Caterer's room . . . . .	21	9½	9½			
	Pantry . . . . .	8½	9½	9½			
	(a) Cook-house—				820	With a 7' verandah in front, containing a fuel store 6½' x 4½'.	67 B. I.
	Kitchen . . . . .	18	18	13			
	Scullery . . . . .	13½	6	13			
	Cook's room . . . . .	10	6	8			
	Meat store . . . . .	6	6	8			
	(b) Latrine—				100		133 B. I. modified.
	Privy of 2 seats . . . . .	10	5½	9			
	(c) Urinary—				23		133 B. I.
	1 compartment . . . . .	6½	2½	7			
	(iii) For a wing.						
	Mess room . . . . .	30	24	16	5,100	A 10' verandah in the clear all round, containing the beer store, caterer's room, pantry and a small lavatory near the ante-room.	67 B. I. modified.
	Ante-room . . . . .	20	24	16			
	Billiard room . . . . .	23	24	16			
	Beer store . . . . .	24	9½	9½			
	Caterer's room . . . . .	21	9½	9½			
	Pantry . . . . .	8½	9½	9½			
	Subsidiary buildings . . . . .	as	in	(i)			
120	<b>KAHARS' HUT.</b>						
	For a battalion or wing.					To be built near the quarter guard.	
	Hut for 4 kahars . . . . .	20	12	10	360		
121	Walls . . . . .	as	required.			See para. 60.	
	<b>BRITISH INFANTRY IN THE HILLS.</b>						
122	<b>BARRACKS FOR SINGLE RANK AND FILE.</b>						
	(i) For a battalion.						
	9 half-company huts with open verandahs, each containing—				6,640	The number of rank and file in a battalion is 936, of which band and drummers number 36, and married men 12, leaving 904 men to be accommodated in single men's barracks; this gives 114 men per company.	1 hutted camp.
	56 { 4 dormitories for 14 men, each . . . . .	42	22	10			
	2 sergeants' quarters as in item . . . . .			23			
	7 half-company huts with open verandahs, each containing—				6,330	The band are to have a separate barrack, equal in size to a half-company barrack, in which case no special provision is necessary for a band practice room. Nine half-company huts (including one for the band) for 56 men and 8 half-company huts for 53 men are therefore required.	1 hutted camp.
	53 { 3 dormitories for 14 men, each . . . . .	42	22	10			
	1 dormitory for 16 men . . . . .	48	22	10			
	1 sergeant's quarter . . . . .	as in item		23			
	1 half-company hut with open verandahs 53 men . . . . .	as above			6,830		1 hutted camp.
	2 sergeants' quarters . . . . .	as in item		23			

Item No.	Buildings.	Length.	Breadth.	Height.	Floor area, approximate.	Remarks.	Type plan and series.
122	BARRACKS FOR SINGLE RANK AND FILE— <i>concl'd.</i>	Ft.	Ft.	Ft.	Sq. ft.		
	(a) 4 combined dining halls and kitchen, each containing—					One for 2 companies.	
	2 dining halls, each . . . . .	52	22	10	4,360	No verandahs With 7' verandah in front, containing 2 fuel stores 6' x 3½' each.	9 hutted camp.
	1 kitchen . . . . .	28	16	10			
	2 sculleries, each . . . . .	12	8	9			
	2 meat stores, each . . . . .	10	8	8			
	2 cooks' rooms, each . . . . .	8	8	8			
	1 dining hall and kitchen containing—					For band barrack.	
	1 dining hall . . . . .	16½	22	10	1,285	No verandahs With 7' verandah in front containing fuel store 6' x 3½'.	9 hutted camp.
	1 kitchen . . . . .	14	16	10			
	1 scullery . . . . .	12	8	9			
	1 cook's room . . . . .	8	8	8			
	1 meat store . . . . .	8	8	8			
	(b) Latrine 17, each containing—						
	Privy of 5 seats . . . . .	13	8½	7	260	One for each half-company.	132 B.I. modified.
	Sweeper's room . . . . .	8	5	7			
	Dry earth bin . . . . .	5	3				
	(c) Lavatories 17, each containing—						
	1 room for 10 basins . . . . .	13½	14	8	390	Do. do.	138 B.I. modified.
	2 private bath-rooms . . . . .	5½	4½	8			
	(d) Urinaries 17, each of 2 compartments . . . . .	6½	5	7	48	Do. do.	133 U.I.
	(ii) For a head-quarter wing.						
	5 half-company huts with open verandahs each to hold—					The number of rank and file in a head-quarter wing is 534, of whom band and drummers number 28 and married men 7, leaving 499 single men; this gives 124 men per company.	1 hutted camp.
	3 dormitories, for 16 men, each . . . . .	48	22	10	7,220		
	1 dormitory for 14 men . . . . .	42	22	10			
	2 sergeants' quarters . . . . .	as in item	22				
	3 half-company huts with one instead of two sergeants' quarters . . . . .	as	above		6,710		1 hutted camp.
	Band barrack with open verandah—						
	3 dormitories for 16 men, each . . . . .	48	22	10	5,320	One for 2 companies . . . . .	9 hutted camp.
	1 sergeant's quarter . . . . .	as in item	22				
	(a) 2 dining halls and kitchens . . . . .	...	...	...	...		
	As in (i) (a) but dining halls 66½' long, each . . . . .	...	...	...	4,590		
	combined dining hall and kitchen to hold—	...	...	...	...	For band barrack.	
	1 room for 23 men . . . . .	13	22	10	1,195	No verandahs With 7' verandah in front containing fuel store 6' x 3½'.	9 hutted camp modified.
	1 kitchen . . . . .	14	16	10			
	1 scullery . . . . .	10	8	9			
	1 cook's room . . . . .	8	8	8			
	1 meat store . . . . .	8	8	8			
	(b) Latrines, 9 . . . . .	as in (i)			260	One for each half-company and one for the band.	
	(c) Lavatories, 9 . . . . .	as in (i)			390		
	(d) Urinaries, 9 . . . . .	as in (i)			48		



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
131	INSTITUTE.	Ft.	Ft.	Ft.	Sq. ft.	For other portions of the institute see item 31.	...
	(i) For a battalion.						
	Liquor bar portion—					The authorized area, exclusive of bath-rooms and open verandahs, is 2,144 sq. ft.	1 hutted camp.
	Privates' room . . . . .	45	20	10	4,820		
	Bar or issue room . . . . .	10	20	10			
	Beer store . . . . .	19	20	10			
	Corporals' room . . . . .	20	20	10			
	Sergeant's quarter . . . . .	as in item	22				
	Theatre . . . . .	75	20	10	...	.....	
	(a) Latrine—					.....	131 H. I.
	Privy of 1 seat . . . . .	4	3		40	.....	
	(b) Urinary—						133 B. I.
	2 compartments . . . . .	6½	6	7	48		
	(ii) For the head-quarters and six companies of a battalion.						
	Liquor bar portion—					The authorized area, exclusive of bath-rooms and open verandahs, is 1,724 sq. ft.	1 hutted camp, modified.
	Privates' room . . . . .	33	20	10	4,000		
	Bar or issue room . . . . .	10	20	10			
	Beer store . . . . .	18	20	10		.....	
	Corporals' room . . . . .	12	20	10			
	Sergeant's quarter . . . . .	as in item	22				
	Theatre . . . . .	63	20	10			
	Subsidiary buildings . . . . .	as in (i)					
	(iii) For a head-quarter wing.						
	Liquor bar portion—					The authorized area, exclusive of bath-rooms and open verandahs, is 1,484 sq. ft.	1 hutted camp, modified.
	Privates' room . . . . .	25	20	10	3,510		
	Bar or issue room . . . . .	24	20	10			
	Beer store . . . . .	12	20	10			
	Corporals' room . . . . .	as in item	22				
	Sergeant's quarter . . . . .	41	20	10	...	.....	...
	Theatre . . . . .	as in (i)			...	.....	...
	(b) Latrine . . . . .	as in (i)					
	(d) Urinary—						
	1 compartment . . . . .	6½	2½	7	28	...	133 B. I. modified.
	(iv) For a detached wing.						
	Liquor bar portion—					The authorized area, exclusive of bath rooms and open verandahs, is 1,404 sq. ft.	1 hutted camp.
	Privates' room . . . . .	23	20	10	3,380		
	Bar or issue room . . . . .	22	20	10			
	Beer store . . . . .	12	20	10			
	Corporals' room . . . . .	as in item	22				
	Sergeant's quarter . . . . .	as in (i)			...	.....	...
	(b) Latrine . . . . .	as in (i)			...	.....	...
	(d) Urinary . . . . .	as in (ii)			...	.....	...
	(v) For a detachment of 2 companies.						
	Liquor bar portion—					The authorized area, exclusive of bath-rooms and open verandahs, is 698 sq. ft.	1 hutted camp.
	Privates' room . . . . .	18	20	10	1,760		
	Bar and issue room . . . . .	18	10	10			
	Beer store . . . . .	18	10	10			
	Corporals' room . . . . .	18	10	10			
	(b) Latrine— . . . . .	as in (i)			...	.....	...
	(d) Urinary . . . . .	as in (ii)			...	.....	...
131A	LAUNDRY STORE.						
	(i) For a battalion.						
	1 dirty clothing room . . . . .	25	13	13½	918		
	1 making up room . . . . .	30	13	13½		.....	74 B. I.
	(ii) For less than a battalion, but not less than a company.						
	1 dirty clothing room . . . . .	15	13	13½	605		
	1 making up room . . . . .	20	13	13½		.....	74 B. I.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
132	MAGAZINE. (i) For a battalion S. A. ammunition room. . . . .	16	16	16	480	See para 47. This will usually be provided for in the central station magazine. If so, a small expense store to hold 60 boxes of ammunition will be provided in the lines.	
	(ii) For a wing. S. A. ammunition room. . . . .	16	10	16	340		
133	ORDERLY AND COURT-MARTIAL ROOMS— (i) For a battalion. Orderly-room. . . . . Court-martial room . . . . . Pay office . . . . . 2 bath-rooms, each . . . . .	18 24 18 8	20 20 20 7	10 10 10 7	2,230	Hut type; 9' verandah in front.	1 hutted camp note.
	(d) Urinary— 1 compartment. . . . .	6½	2½	7	28	Not to be provided if a latrine or urinary exists near.	133 B. I.
	(ii) For a head-quarter wing Orderly room . . . . . Court-martial room . . . . . Pay office . . . . . 2 bath-rooms, each . . . . .	15 24 12 6	20 20 20 7	10 10 10 9	1,940	See remarks against (i)	1 hutted camp, modified.
	(d) Urinary . . . . .	as in	(i)	(d)	28	See remarks against (i) (d).	
	(iii) For a detached wing. As in (i) but without the pay office . . . . . (d) Urinary . . . . .	as in	(i)	(d)	1,560 28	See remarks against (i). See remarks against (i) (d).	1 hutted camp, modified.
134	PARADE GROUND . . . . .	no	size	laid	down.		
135	PRAYER ROOM . . . . .	see	item	32			
136	QUARTER GUARD AND DETENTION ROOMS. (i) For a battalion. Guard room for 18 men Guard detention room for 14 men . . . . . Provost-serjeant's quarter . . . . . 10 barrack detention rooms, each . . . . .	54 42 as in	20 20 item	10 10 23	3,790	Hut type; 9' verandah in front.	64 A. to D B. I. modified.
	(b) Latrines— 2 privies each of 3 seats, each . . . . . Covered passage for sentry . . . . .	8½ 9½	8½ 4½	7 7		Hut type is not suitable. Verandah in front of barrack detention rooms to be 7½' wide if barrack detention rooms are used in winter, warming apparatus is to be provided.	64 B. B. I. modified.
	(c) Lavatory— 1 room for 10 basins . . . . . 2 private bath-rooms . . . . .	13½ 5½	14 4½	8 8	300		64 B. B. I. modified.
	(d) Urinary— 2 compartments . . . . .	6½	5	7	48		133 B. I.
	(ii) For a head-quarter wing. Guard room for 12 men Guard detention room for 10 men . . . . . Provost-serjeant's quarter . . . . . 6 barrack detention rooms, each . . . . .	36 30 as in	20 20 item	10 10 22	2,910	See remarks against (i).	64 A. to D B. I. modified.
		10	10	13	1,400	See remarks against (i).	64 B. B. I. modified.

Item No.	Buildings.	Length	Breadth	Height	Plinth area, approximate	Remarks.	Type plan and service.
136	QUARTER GUARD AND DETENTION ROOMS— <i>concd.</i> (i) For a head-quarter wing— <i>concd.</i> (b) Latrine— 2 privies each of 2 seats, each Covered passage for sentry (c) Lavatory— Room for 8 basins 2 private bath-rooms, each (d) Urinary (iii) For a detached wing Guard room for 12 men Guard detention rooms for 8 men 4 barrack detention rooms, each Subsidiary buildings	Ft.	Ft.	Ft.	Sq. ft.		
		5½	8½	7	210		64 B. B. I. modified
		6½	4½	7			64 B. B. I. modified.
		11	14	8	320		
		5½	4½	8	48		
		as in	(i)	(d)			
		26	20	10	2,110	See remarks against (i).	64 A. to D. B. I. modified.
		24	20	10			
		10	10	13	1,010	See remarks against (i).	
		as in	(i)	(d)			
137	QUARTERMASTER'S STORES (i) For a battalion. Store-room Store-room Quartermaster's office Tailor's workshop Dry store (d) Urinary— 1 compartment (ii) For a head-quarter wing. Store-room Quartermaster's office Tailor's workshop Dry store room (d) Urinary— as in (iii) For a detached wing Store-room Quartermaster's office Tailor's workshop Dry store room (d) Urinary— as in	42	20	10			
		36	20	10	2,900	Hut type, no verandahs.	
		10	20	10			
		14	20	10			
		12	20	10			
		6½	2½	7	28	Not to be given if a latrine or urinary exists near.	133 B. I.
		50	20	10	2,210	See remarks against (i).	
		10	20	10			
		14	20	10			
		12	20	10			
		as in	(i)	(d)	28	See remarks against (i) (d).	
		25	20	10	1,020	See remarks against (i).	
		10	20	10			
		14	20	10			
		12	20	10			
		as in	(i)	(d)	28	See remarks against (i) (d).	
138	REGIMENTAL WORKSHOPS, VOLUNTARY. (i) For a battalion Carpenter's shop Painter's Tinmith's Shoemaker's Bookbinder's Watchmaker's Printer's (d) Urinary— 2 compartments (ii) For a wing. Carpenter's shop Painter's Tinmith's Shoemaker's Bookbinder's Watchmaker's Printer's (d) Urinary— 1 compartment	37	20	10			
		16	20	10			
		10	20	10			
		16	20	10	3,550	Hut type, 6' verandah in front.	
		12	24	10			
		12	24	10			
		18	20	10			
		6½	5	7	48	Not to be given if a latrine or urinary exists near.	133 B. I.
		24	20	10			
		10	20	10			
		10	20	10			
		10	20	10	2,630	See remarks against (i).	
		12	24	10			
		12	24	10			
		12	20	10			
		6½	2½	7	28	See remarks against (i) (d).	133 B. I.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft. sec	Ft. para	Ft. 49	Sq. ft.		
139	BIFLA RANGE . . .						
140	SCHOOL.						
	(i) For a battalion.					See para. 41.	
	Class rooms for 120 men.	60	20	10	5,280	For the actual accommodation authorized, which is the same in the hills as for the plains, see item 118. See also item 125 for the accommodation allowed for the school-master and school-mistress. The sizes here given are suitable to the hill type; a 9' verandah to be given in front containing a fuel store 6' x 2½'.	71 E. B. 1 modified.
	Class room for 64 children	54	20	10			
	2 water-rooms, each	42	20	10			
		71	8	9			
	(b) Latrine—						
	Privy for boys, 4 seats	10½	8½	7	300		
	" " girls, 4 "	10½	8½	7			
	Urinary for boys	4½	3½	...			
	Dry earth shed	4½	3½	...			
	(d) Urinary—						
	2 compartments.	8	5	7	48	For men.	133 B. I.
	(ii) For a head-quarter wing.						
	Class room for 80 men	42	20	10	3,720	See remarks against (i).	
	Class room for 36 children	36	20	10			
	2 water-rooms, each	30	20	10			
		71	8	9			
	(b) Latrine—						
	Privy for boys, 2 seats	8	8½	7	230		
	" " girls, 3 "	8	8½	7			
	Urinary for boys	4½	3½	...			
	Dry earth shed	4½	3½	...			
	(d) Urinary	as	in (i)	(d)	48	For men.	
	(iii) For a detached wing.						
	Class room for 64 men	60	20	10	3,090	See remarks against (i).	
	" " " 36 children	30	20	10			
	2 water-rooms, each	71	8	9			
	Subsidiary buildings	as	in	(ii)			
141	SERGEANTS' Mess.						
	(i) For a battalion.						
	Mess-room	40	20	10	4,010	Hut type; 9' verandah in front containing the pantries and a small lavatory near the ante-room	1 hutted camp.
	Ante-room	28	20	10			
	Billiard room	24	20	10			
	Caterer's room	10	20	10			
	Beer store	10	20	10			
	Pantry	71	10	9			
	(a) Cook-house—						
	Kitchen	20	12	10	657	7' verandah in front containing a fuel store 3½' x 6'.	67 B. I. modified.
	Scullery	6	12	10			
	Cook's room	10	6	10			
	(b) Latrine—						
	Privy of 2 seats	5½	8'	7	100		132 U. I. modified.
	(d) Urinary—						133 B. I.
	1 compartment	6½	2½	7	23		
	(ii) For a wing.						
	Mess-room	24	20	10	3,482	See remarks against (i).	1 hutted camp.
	Ante-room	28	20	10			
	Billiard room	24	20	10			
	Caterer's room	10	20	10			
	Beer store	10	20	10			
	Pantry	71	10	9			
	Subsidiary buildings	as	in	(i)			
142	KAHARS' HUT						
	For battalion or wing.						
	Hut for 4 kahars	20	10	8	320	To be built near the quarter-guard.	

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks	Type plan and series
149	<b>FOLLOWERS' HOSPITALS.</b>						
	(i) <i>In the plains.</i>					Only authorized, where absolutely necessary, for the A. H. corps and the Indian establishment attached to British troops on the following scale:—	
	Block for 10 men—					Patients.	
	2 dormitories for 14 men, each	42	20	13½	5,490	Regiment of cavalry 89	33 I. I.
	2 small wards, each	12	12	11½		A battery, R. H. A., 15	
	2 bath-rooms	12	12	11½		2 batteries or companies, R. F. A. or R. G. A. 15	
	Office	14	14	11½		British mountain battery 6	
	Dispensary	14	14	11½		Battalion of infantry 15	
	Hospital store	8	8	8			
	Medical "	8	8	8			
	(a) Cook-house	24	14		430	To be divided into 2 compartments, 1 for Mahomedans and 1 for Hindus, with doors at opposite ends.	
	(b) Latrine of 5 seats	15	6		160		
	(c) Washing platform	15 in.	10 ft.	2½		A raised pucca floor should be given with one drain for urine and a second drain for ablution water, running into iron receptacles, covered with dammer, outside the building, or a corrugated iron larnie for Indians may be given.	
	(ii) <i>In the hills.</i>						
	Block for 30 men—						
	2 wards for 14 men, each	42	20	15½	4,190		34 I. I.
	2 small wards	18½	10	10½			
	Office	18½	10	10½			
	Dispensary	9½	10	10½			
	Ditto	5	10	10½			
	Store-room	9½	5	11			
	2 bath-rooms each	9½	8	11			
	Subsidiary buildings	as	in	(i)		See remarks against (i) above	
150	<b>QUARTERS FOR LADY NURSES.</b>						
	(i) <i>In the plains.</i>					The distribution of lady nurses by Divisions is given in A. F. Medical.	
	Block of 4 quarters—						
	4 combined sitting and bed rooms, each with a floor area of 336 sq. ft.					A bath room 6' x 8' and a small store room will be provided for each quarter in the verandah.	
	Common dining room	24	15		5,510	The common dining room and sitting room are calculated at 10 sq. ft. for each lady nurse in the station.	
	" sitting "	24	15				
	Pantry in verandah	12	8½				
	(a) Cook-house—						
	Kitchen	10	12	12	310	For the use of all the lady nurses at one station. To be provided with fittings.	
	Cooking place	5	12	21			
	(f) Servants' quarters—						
	Block of 8 quarters, each	10	8	10	310	2 quarters to each lady.	
	(g) Cook-house—						
	Block of 4 each (use each)	12	8	11	500	1 coach-house to each lady.	
	(h) Store—						
	Block of 1 stall, each	12	8	11	500	1 stall to each quarter.	

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks	Type plan and series.
149	<p>QUARTERS FOR LADY NURSES—<i>conold</i> (11) <i>In the hills.</i> Block of 4 quarters— 4 rooms each . . . . . 4 bath-rooms in verandah, each . . . . . Common dining room . . . . . " sitting " . . . . . Store-room . . . . . Pantry-room . . . . . Subsidiary buildings . . . . .</p>	Ft	Ft	Ft	Sq ft.	<p>No scale is laid down for the hills, but the one quoted here gives the area sanctioned at Quetta and should be sufficient. Coach-houses will, however, rarely be required in the hills. The height of the servants' quarters can be reduced to 8 ft</p>	
150	<p>QUARTERS FOR COMMISSIONED AND WARRANT OFFICERS OF THE I. S. M. D.</p>	For sizes of quarters authorized see items	8	10	10	<p>The numbers and ranks of the medical subordinates to be provided with quarters in each hospital will be decided by the A. D. M. S. of the Division or Independent Brigade. See remark against item 10.</p>	
151	<p>QUARTERS FOR SUB-ASSISTANT SURGEONS. <i>In the plains or hills</i> (a) <i>Senior sub-assistant surgeons and sub-assistant surgeons, 1st grade.</i></p>					<p>A sub-assistant surgeon is authorized for each regiment of cavalry and to each battery of artillery (horse, field) howitzer, heavy or mountain also for each departmental followers' hospital</p>	
	<p>Room . . . . . " . . . . . Bath-room . . . . . Verandah . . . . . Enclosure wall of court-yard . . . . . Shed for cooking-pots, etc . . . . . (b) Latrine . . . . .</p>	16 12 8 29½ 46 7½ 6	12 1 6 6 11 5 5	12 12 8½ 8½ 8 8½ 8½	760 70 120	<p>A portion of the verandah of each quarter is to be divided off, to form a cooking place at one end. In the hills the height of the main rooms will be reduced to 10' and if the site will not admit of it, the court-yard may be omitted. An open court-yard 29½' x 17½' containing the latrine and shed for cooking-pots, water, etc</p>	11 I. I.
	<p>(i) <i>Sub-assistant surgeons, 2nd and 3rd grades—</i> Room . . . . . Bath-room . . . . . Verandah . . . . . Enclosure wall of court-yard . . . . . (a) Shed for cooking pots, etc . . . . . (b) Latrine . . . . .</p>	16 8 16 61½ 7½ 6	12 6 6 11 5 5	12 8½ 8½ 8 8½ 8½	480 90 120	<p>See remarks against (a) An open court-yard 32' x 16' containing the latrine and shed for cooking-pots, water, etc</p>	11 I. I.
152	<p>QUARTERS FOR HOSPITAL SERVANTS As in item 174, in separate blocks for married and single men, the number of married quarters being regulated by the scale of married establishment authorized in A. R. I., Vol. II.</p>					<p>Quarters to be provided for— (i) <i>A. H. Corps</i> (a) <i>Peon Division</i>, (b) <i>All</i> (except <i>Peon Division</i>), other <i>Mhow Division</i> stations (excluding <i>Jhansi</i> and <i>Jubbulpore Bde.</i>), <i>Karachi</i> and <i>Aden Bdes</i> Ward servants, 1 per 6 beds 1 per 10 beds Cooks, 1 per 25 beds Water carriers, 1 per 25 beds</p>	

Item No.	Buildings.	Length.	Breadth	Height.	Plinth area, approximate	Remarks.	Type plan and series.
152	QUARTERS FOR HOSPITAL SERVANTS— <i>concl'd.</i>	Ft	Ft	Ft	Sq. ft.	<p>Dbobies, 1 per 20 beds</p> <p>Ward sweepers, 1 per 20 beds with 10 per cent reserve additional.</p> <p><i>Other classes.</i></p> <p>Peons } as laid H. S. K. assistants } down in Baidars } A. T. Sweepers } Medical. Kabars— Actual number attached and requiring accommodation in the hospital lunce</p> <p>(i) Female sweepers must be accommodated in the married quarters.</p> <p>(ii) The accommodation for single men should be divided into rooms of various sizes to suit the different castes.</p>	
153	<p>QUARTERS FOR HOSPITAL STORE-KEEPERS.</p> <p>(i) <i>In the plains or hills.</i></p> <p>Samans for sub assistant surgeons, 2nd and 3rd grades</p> <p>(ii) <i>In stations under Bombay Government</i></p> <p>2 main rooms, each</p> <p>2 verandah rooms, each</p>	see item	151	(ii)	1,070	<p>To be built within the hospital enclosure. No cook-house to be provided, as the store-keeper can make his own <i>chulas</i> in the verandah.</p> <p>Latrines will be provided from cantonment funds.</p> <p>Compensation is not admissible if the zenana compound is omitted. For number of store-keepers see A. T. Medical.</p>	
154	<p>ADMINISTRATIVE OFFICES.</p> <p><i>In the plains or hills</i></p> <p>Block for a hospital of 12½ beds</p> <p>Room for assistant surgeon on duty</p> <p>Surgery and dispensary</p> <p>Medical store</p> <p>Receiving room</p> <p>Office</p> <p>Store-keeper's office</p>	14½	20	16	1,240	<p>In the hills and hutted camps the height of the rooms will be reduced to 10 feet.</p> <p>Shelves should be given in the offices, surgery, and medical store.</p> <p>For very large hospitals it may be necessary to provide two administrative blocks.</p>	5 Hospl.
155	<p>ENCLOSURE WALL OR FENCE.</p> <p>(i) <i>For the hospital.</i></p> <p>(ii) <i>For the lady nurses' quarters</i></p>					<p>Should be bricked walls, 2½' to 3' high or a fence 4½' high, the latter is always to be given if the hospital wards are within 100' of it. Wire fencing is usually given.</p> <p>An enclosure is not generally necessary in the hills.</p>	
156	<p>GUARD-ROOM</p> <p>(i) <i>In the plains.</i></p> <p>Room</p> <p>10 verandah on 3 sides</p> <p>Abutatory should be given by enclosing a portion of the verandah</p> <p>(ii) <i>In the hills.</i></p> <p>Room</p> <p>9 verandah in front</p>	30	24	10	2,270	<p>For 1 corporal and 6 privates. A guard-room should only be constructed if considered necessary by the local authorities: a separate corporal's room is unnecessary.</p>	42 Hospl.
		21	20	10	850	See remarks against (i).	42 Hospl. modified.

Item No.	Buildings	Length.	Breadth.	Height.	Floor area, approximate.	Remarks.	Type plan and service.
157	LAUNDRY. <i>In the plains or hills.</i> Ironing, sorting and store room . . . Steaming room . . . Soiled linen store . . .	30 16½ 9½	15 15 15	11½ 11½ 9½	1,415	With 10' verandah on one side This size is suitable for a hospital of 100 to 124 beds For smaller hospitals the steaming room and store should be reduced in size For larger hospitals the ironing room, as well as the steaming and store rooms, should be increased in size.	
158	MORTUARY. (i) <i>In the plains.</i> Room . . . (ii) <i>In the hills.</i> Room . . .	18 18	12 12	16 12	330 330	Floor to be such as to admit of washing without absorption of the water and not liable to fracture or cracks, with a drain leading to a receptacle above ground level outside. A sink 3' x 2' x 3' with a trough 9' deep, lined with lead to be placed opposite a window, water to be laid on over the sink. Cupboards or shelves to be built into the walls. A towel roller, pegs for clothes, and bracket with a hook for suspending a spring balance, should be provided as fixture. The scale of ambulances is 1 for every 50 beds or fraction thereof, and 1 compartment for a hearse in addition for each station. The supply of boilers is authorized for each station or section hospital of under 100 beds 15 cubic feet 100 to 150 " 27 " over 150 " 40 " These boilers to be bedded in lime masonry. The authorized area exclusive of a small room for oil and lamps and another for unserviceable stores, is:—for 120 beds or under, at 18 sq ft. per bed, but not to exceed 1,800 sq ft.; for over 120 and up to 250 beds 15 sq. ft. per bed, but not to exceed 3,000 sq ft.; for over 250 beds 12 sq ft. per bed. Fixed cupboards or shelves, preferably of iron or stone, should be given in the walls of these store-rooms, the lowest shelf being 6' above the floor. Windows should be barred.	7 Hospl.
159	SHED FOR AMBULANCE CARS AND HEARSES. (i) <i>In the plains</i> 4 compartments each (ii) <i>In the hills.</i> Not usually required	16	11	13 or 14½	940		6 Hospl.
160	BOILER FOR DISINFECTING CLOTHING AND BEDDING. <i>In the plains or hills.</i>						
161	STORE-KITCHEN'S STORE <i>In the plains or hills</i> For a hospital of 124 beds— Bedding store . . . Miscellaneous store . . . Unserviceable stores . . . Oil and lamp store . . . 10 verandah on one side A bin for coir to be given in one corner.	57½ 20 10 10	24 24 8½ 8½	11 or 10 10 8½ 8½	2,830		5 & 5A Hospl modified
162	STORE FOR BURNING DEJECTA <i>In the plains or hills</i>					To be built in every hospital compound. Where the hospitals are together on one site, one store will suffice. Where the hospitals are situated apart from one another, one store for each should be provided. The cost to be kept as low as possible.	16 Hospl



Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
163	WELLS OR WATER-SUPPLY.	Ft.	Ft.	Ft.	Sq. ft.		
164	WASHING PLATFORMS FOR HOSPITAL FOLLOWERS	6	4	...	...	According to local conditions. To be provided where a piped water supply has been installed. Where more than one tap is provided, the dimensions should be proportionately increased.	31
	<b>INDIAN TROOPS</b>						
	Plan of lines—						
	(i) For Indian cavalry.						
	(ii) For Indian infantry.						94 I. I.
171	QUARTERS FOR INDIAN OFFICERS—						
	(i) A regiment of cavalry—						
	(a) For Risaldar Major, Risaldars and Risaldars:—						
	8 detached quarters, each containing—					The cookhouse, bathing place, latrine and porch to be provided in the courtyard of each quarter, which is 35½' × 32'.	03 I. I. modified.
	2 rooms, each . . . . .	17	12	13½	918		
	8' verandah in front . . . . .	85½	8	9½			
	Cookhouse . . . . .	6	6	8	74		
	Covered bathing place . . . . .	4	4	7½	30		
	Latrine . . . . .	6	5	7½	66		
	Covered porch . . . . .	12	8	9½	165		
	(b) For Jemadars:—						
	9 detached quarters, each containing:—					See remarks against (a). The courtyard in this case will be 31½' × 32'.	03 I. I.
	2 rooms, each . . . . .	15	10	13½	739		
	8' verandah in front . . . . .	31½	8	9½			
	Cookhouse . . . . .	6	6	8	74		
	Covered bathing place . . . . .	4	4	7½	30		
	Latrine . . . . .	6	5	7½	66		
	Covered porch . . . . .	12	8	9½	165		
	(ii) A mountain battery in the plains						
	3 detached quarters, each containing:—					See remarks against (i) (b).	03 I. I.
	2 rooms, each . . . . .	15	10	13½	739		
	8' verandah in front . . . . .	31½	8	9½			
	Cookhouse . . . . .	6	6	8	74		
	Covered bathing place . . . . .	4	4	7½	30		
	Latrine . . . . .	6	5	7½	66		
	Covered porch . . . . .	12	8	9½	165		
	Stables—						
	Block of 3 stalls, each . . . . .	12	8	9	430	One for each Indian officer. The height of the quarters to be reduced to 9' and the court-yards may have to be omitted for want of space.	03 I. I. modified.
	(iii) A mountain battery in the hills.						
	Same as for the plains.						
	(iv) A battalion in the plains.						
	16 detached quarters, each containing:—					See remarks against (i) (b).	03 I. I.
	2 rooms, each . . . . .	15	10	13½	739		
	8' verandah in front . . . . .	31½	8	9½			
	Cookhouse . . . . .	6	6	8	74		
	Covered bathing place . . . . .	4	4	7½	30		
	Latrine . . . . .	6	5	7½	66		
	Covered porch . . . . .	12	8	9½	165		

## India Army Regulations—continued.

Oct. Appx.

## Appendix F—

I. A. O.—1919

Case No. 9570,

(Q. M. G. 3-A.)

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area approxi- mate.	Remarks	Type plan and series.
171	QUARTERS FOR INDIAN OFFICERS. (vi) <i>A Mule Corps in the plains</i> (vii) <i>A Mule Corps in the hills</i>	Ft.	Ft.	Ft.	Sq. ft.	To be built for the num- ber authorised for the unit.	93-I. I.
		As	in	item	171 (v)		
172	Quarters for mar- ried Non-Com- missioned Officers and men—  (vi) <i>A Mule Corps in the plains.</i> For superior per- sonnel . . . . .	As	in	item	172 (s)	Authorised for Kot Daffa- dars, Quartermaster Daffadars and Veterinary Assistants (other than those graded as Indian Officers).	92-I. I.
	For other married ranks . . . . .	As	in	item	172 (sv)	For 10 per cent. of strength. Civilian clerks should not be provided with accom- modation at Government expense.	
173	(viii) <i>A Mule Corps in the hills</i> Barracks for single men—	As	in	item	172 (v)	For 10 per cent. of strength. See remarks against (v)	92-I. I.
	SINGLEMEN'S BAR- RACKS (vi) <i>A Mule Corps in the plains</i> (a) Cooking sheds . (b) Latrines . . . . (c) Bathing places .	} As in item 173 (sv) Seats at a per cent. of strength. 1 Cubicle, 4' x 3' per 27 men.			173 (r)	To be built for the number authorised for the unit.	91-I. I. 92-I. I.
	(vii) <i>A Mule Corps in the hills</i> Subsidiary accom- modation . . . . .	As	in	item	173 (r)		
		As	in	item	173 (r)	To be built for the num- ber authorised for the unit.	91-I. I. modified.



## India Army Regulations—continued.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area approximate.	Remarks.	Type plan and series.
174 -A.	FOLLOWERS' QUARTERS. <i>A Mule Corps</i>	Ft.	Ft.	ft.	Sq. ft.		
180	FORGE. (ii) <i>A Mule Corps</i> . Forge . . . . . Store . . . . . 2 Shoeing sheds each . . . . . (iii) <i>A Mule Corps</i> detachment. Forge store . . . . . Shoeing shed . . . . .	As	in	item	174	Stocks to be provided on the scale of one per shed.	86-I. M. B. modified.
		20	20	10	...		
		8	20	10	...		
		33	9	9			
		Total of 3 s. ft. per animal in store and shed.				Stocks to be provided on the scale of one per shed.	86-I. M. B. modified.
182	BHOOSA STORES (i) <i>A Mule Corps</i> or detachment . . . . .	At	1 s.	ft. per animal		Minimum 1 store 10' x 10' x 10' per troop or less	
186	OFFICE. (ii) <i>A Mule Corps</i> . 3 rooms, each . . . . .	11	16	16		With a verandah 8' wide in front and back containing a record room 8' in length and a bath room 7' in length. No rent will be charged for office and orderly rooms. To be provided only in case of detached subdivision or half corps. Minimum 1 officer.	
	(iii) <i>A Mule Corps</i> detachment Officers' room . . . . . Clerks' room . . . . .	2	units each of 72 s. ft. per officer.			Minimum 2 clerks. See remarks against (ii)	
190	QUARTER GUARD (vii) <i>A Mule Corps</i> . Guard room . . . . . Cells . . . . . Quarter masters stores . . . . . (viii) <i>A Mule Corps</i> detachment. Guard room . . . . . Cell . . . . .	As in item 190 (ii)				Verandah in front 8' wide. 2 s. ft. per man.	2-I. I. modified.
		16	12	12	...		
		8	12	12	...		
	Quarter masters' stores . . . . .					19 s. ft. per man. Minimum for 1 Non-Commissioned Officer and 3 men. Verandah in front 8' wide. 2 s. ft. per man.	2-I. I. modified.



## India Army Regulations—continued.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. ft.		
190 -A.	RATION AND GRAIN STORES.						
	(a) Ration stores .	As in para 74-A				10' verandah in front To be built in one block.	
	(b) Grain stores .	At 3 s. ft per animal.					
196	STANDINGS.						
	(iv) <i>A Mule Corps.</i> Standings each .	12	7	..	..	Mangers to be provided	
197	VETERINARY HOS- PITAL.						
	(iii) <i>A Mule Corps.</i> Pharmacy . . . . .	12	10	12	..	Accommodation in covered standings should be provided for 5 per cent of strength less animals accommodated in loose boxes and slinging rooms. A verandah, 6½' clear on S. and W. sides of Pharmacy and store if exposed. In the hills the height should be 10'	108-I. C. modi- fied.
	Store . . . . .	12	10	12	..		
	2 Slinging rooms each . . . . .	12	8	13	..		
	Loose boxes for 1 per cent. of strength, each . .	12	8	13	..		
	Covered standings each . . . . .	12	7	13	..		
	Central passage 4' clear						
	Isolation block— 1 Loose box . . . .	12	8	13	..	In the hills the height should be 10'.	
	(iv) <i>A Mule Corps</i> <i>detachment</i> Combined Pharmacy and store . . . . .	12	10	12	..	See remarks against (iii).	108-I. C. modi- fied
	1 Slinging room . .	12	8	13	..		
	Covered standings each . . . . .	12	7	13	..		
	Central passage 4' clear.						
	Isolation block— 1 Loose box . . . .	12	8	13	..	In the hills the height should be 10'. At 60 s. ft. in plains and 50 s. ft. in hills for every authorised artificer Minimum for each shop 10' x 10' x 12'. Verandah 8' in front.	
198 -A.	WORKSHOPS.						
	(iii) <i>A Mule Corps</i> <i>or detachment.</i> Carpenters shop. Saddlers . . . . . Blacksmiths . . . .						

A. H. BINGLEY, Major-General,  
Secretary to the Government of India.



Item No.	Buildings	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks	Type plan and series
171	QUARTERS FOR INDIAN OFFICERS— <i>conold.</i> (v) <i>A battalion in the hills</i> Same as for the plains—	Ft.	Ft.	Ft.	Sq. ft.	See remarks against (iii)	93 I. I.
172	QUARTERS FOR MARRIED N. C. OS AND MEN— (i) <i>A regiment of cavalry.</i> (a) 3 blocks each of 8 quarters. 5 blocks each of 7 quarters. 1 block of 1 quarter Each quarter containing:— 1 room 8' verandah in front Open bathing place (b) Latrines for women— Scale of seats at 8 per cent of strength. (ii) <i>A mountain battery in the plains</i> (a) 3 blocks, each containing 10 quarters, each:— 1 room 8' verandah in front Open bathing place (b) Latrines for women (iii) <i>A mountain battery in the hills.</i> (a) 3 blocks, each containing 10 quarters, each:— 1 room Verandah Bathing place (b) Latrines for women (iv) <i>A battalion in the plains</i> (a) 4 blocks, each of 20 quarters, each:— 1 room 8' verandah in front Open bathing place	...	...	...	2,911 2,552 393 333 23 3,276 230 2,000 230 6,528 460	The authorized number of married men is 60 The detached quarter is for the sutri and should be provided near the veterinary hospital 5' of the verandah will be enclosed as a cooking place The bathing place will be given in the courtyard which is 15' x 11½' Separate latrines are not to be given for each quarter. The authorized number of married men is 60 5' of the verandah to be enclosed as a cooking place A courtyard 12' x 16' is allowed for each quarter with bathing place in it See remarks against (i) (b). See remarks against (ii) If the site admits a courtyard 12' x 10' should be given with bathing place 4' x 4' in it See remarks against (i), (b) See remarks against (ii) Accommodation is provided for 60 married men. In the case of Gurkha battalions and of Sikh regiments accommodation is provided for 240 families the accommodation for single men being reduced proportionately Courtyards are not to be provided in the case of quarters for married men of Gurkha regiments.	92 I I modified 92 I I modified 92 I I



Item No.	Buildings.	Length.	Breadth	Height.	Plinth area, approximate	Remarks.	Type plan and series.
172	QUARTERS FOR MARRIED N. C. Os. AND MEN— <i>concd.</i>	Ft.	Ft.	Ft.	Sq. ft.		
	(b) Latrines for women	..	..	..	..	See remarks against (i) (b).	
	(c) <i>A battalion in the hills.</i>						
	(a) 8 blocks, each of 10 quarters, each—						
	1 room	10	10	12	2,060	See remarks against (iii) and (iv).	92 I. I. modified.
	Verandah	10	5	8½			
	Bathing place	4	4	4			
	(b) Latrines for women	..	..	..	..	See remarks against (i) (b).	
173	BARRACKS FOR SINGLE MEN.						
	(i) <i>A regiment of cavalry.</i>						
	8 half squadron barracks.					Each room to have an equipment store, not less than 4' x 4' for each jori at the end of the room. Stores will be arranged back to back everywhere.	89 I.C.
	For each squadron—						
	1 barrack containing—						
	8 rooms, each for 8 men, each	21	20	13½	10,136		
	2 rooms, each for 10 men, each	30	20	13½			
	8' verandah on both sides						
	1 barrack, containing—						
	7 rooms, each for 8 men, each	24	20	13½	10,380		
	1 room for 10 men exclusive of equipment stores	30	20	13½			
	8' verandah on both sides						
	(a) Cooking sheds—						
	8 sheds each	30½	10	9	435	A portion 5' x 5' in each shed to be enclosed as fuel store. A movable type of latrine is to be used, except in places like forts where this cannot be done; in such cases a Horbury or such similar pattern may be used.	92 I.I. modified.
	(b) Latrines—						
	4 of 10 seats each.						
	(ii) <i>A mountain battery in the plains.</i>						
	3 barracks for gunners each for—						
	2 N. C. Os each	12	9½	13½	3,656	This accommodation is calculated on the strength of a 10-pr gun battery, allowing for 30 married N. C. Os. and men. Ends of verandahs should be left open as men will sleep in them during hot weather. A store room 12' x 8' to be given in the verandah of each barrack.	91 I.I. modified.
	36 men, 2 rooms each	54	20	13½			
	8' verandah front and back	126	8	8½			
	3 barracks for drivers—						
	2 each for—						
	1 N. C. O.	12	9½	13½	5,861	In the case of barracks having only one N. C. Os. quarter, the store room should be provided under the main roof.	
	28 men { 2 rooms each	60	20	13½			
	1 room	54	20	13½			
	8' verandah, in front	163½	8	8½			
	.. back	150	8	8½			
	1 barrack for—						
	1 N. C. O.	12	9½	13½	8,103		
	60 men, 3 rooms each	60	20	13½			
	Verandah, front	190½	8	8½			
	.. back	186	8	8½			

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.		
173	BARRACKS FOR SINGLE MEN— <i>concid.</i>	Ft.	Ft.	Ft.	Sq. ft.				
	(a) Cooking sheds for gunners—								
	3 sheds, each . . . for drivers—	34	10	9	481	A portion 5' x 5' in each shed to be enclosed as fuel store.	92 I. I. modified		
	2 sheds, each . . .	53	10	9	728				
	1 shed . . .	55	10	9	754				
	(b) Latrines—								
	3 of 8 seats each	...	...		...	See remarks against (i) (b).			
	(iii) A mountain battery in the hills.								
	3 barracks for gunners, each for—								
	2 N. C. Os, each . . .	10	8	12	3,480				
	36 men, 2 rooms, each	45	20	12					
	Verandah, front and back . . .	105	5	8					
	3 barracks for drivers, 2 each for—								
	1 N. C. O. . . . .	10	8	12	5,170	See remarks against (ii).	92 I. I. <i>concid.</i>		
	58 men { 2 rooms each . . .	50	20	12					
	{ 1 room . . . . .	45	20	12					
	Verandah, front . . .	159	5	8	5,330				
	back . . . . .	148	5	8					
	1 barrack for—								
	1 N. C. O. . . . .	10	8	12					
	60 men, 3 rooms each . . .	50	20	12					
	Verandah, front . . .	104	5	8					
	back . . . . .	153	5	8					
	Subsidiary buildings . . .	as	in	(iv)					
	(iv) A battalion in the plains								
	(a) 16 half company barracks, each for—					Each block accommodates 2 N. C. Os and 48 men, total 32 N. C. Os and 768 men. A store-room should be provided in the verandah.	91 I. I.		
	2 N. C. Os, each . . .	12	9	13	6,732				
	48 men, 4 rooms, each . . .	36	20	13					
	9' verandah in front . . .	163	9	8	3,671	When a verandah at the back is also necessary, the verandahs will be 8' wide. The store room should be under the main roof.	91 I. I. modified		
	(b) Band barracks for—								
	1 N. C. O. . . . .	12	9	13					
	16 men, 2 rooms, each . . .	36	20	13					
	Store-room . . . . .	12	9	13					
	9' verandah in front . . .	87	9	8					
	(c) Cooking sheds—					A portion 5' x 5' in each shed to be enclosed as fuel store. Sheds to be built back to back.	92 I. I.		
	8 blocks, each containing—								
	2 sheds, each . . . . .	45	10	9	1,213				
	For the band 1 shed . . .	16	10	9	104	See remarks against (i) (b).			
	(d) Latrines, 8 of 8 seats each								
	(v) A battalion in the hills.								
	(a) 16 half company barracks, each for—					See remarks against (iv).	91-I. I. modified		
	2 N. C. Os each . . . . .	10	8	12	4,802				
	48 men, 4 rooms, each . . .	30	20	12					
	Verandah in front . . .	138	5	8	3,643				
	Store room . . . . .	12	8	8					
	(b) Band barrack for—								
	1 N. C. O. . . . .	10	8	12					
	16 men, 2 rooms, each . . .	30	20	1					
	Store room . . . . .	10	8	1					
	Verandah in front . . .	71	5						
	(c) Subsidiary buildings . . .	as	in	(iv)					

### Accommodation—Indian Troops—Appx. V.

[illegible]

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
	(c) <i>A detached company S. &amp; M.</i> 1 compartment . . . S A ammunition store	25 10	15 8	10 8	592	...	2 I I. modified
176- A	BARRACK. (i) <i>A regiment of cavalry—</i> 10 houses, each . . . 10 houses, each . . . 8' verandah in front	20 10	8 8	10 10	4,289 4,587	A courtyard 10' wide is allowed at the back of each house	
176- B	CAMEL BREED AND BARRACK FOR CAMEL SOWARS. (i) <i>A regiment of cavalry—</i> Block containing— 1 shed for 8 camels . . . 2 bhoosa khanaas, each . . . Barrack containing— 1 room for 8 sowars . . . 8' verandah on both sides	86 13 24	15 10 20	12 12 13	1,602 368 1,289	The bhoosa khanaas to be provided one on each side of camel shed 4 equipment stores each 4' x 5'. to be provided at one end of the room.	89 I C modified
177	CARPENTER'S AND COLLARMAKER'S SHOPS. For a mountain battery— Carpenter's shop Collarmaker's shop	20 20	20 20	10 10	1,400	A 9' verandah in front.	85 I.M. B
178	DRAINAGE					Will be carried out by the corps under proper direction, but if masonry drains are required they will be built by the M W S or P. W. D	
178- A	DURBAR SHED. (i) <i>A regiment of cavalry—</i> 1 open shed . . .	24	20	10	621		
178- B	EQUIPMENT STORE AND OFFICE. For a detached company S & M. 3 store rooms, each . . . Office . . . (d) Latrine . . .	30 30 2	23 17 2	13 12 2	3,602	A 9' verandah on two sides of office	
179	FIRE ENGINE SHED.	see item		28			
180	FORGE For a mountain battery— Forge . . . Store . . . Shoemaker's shop . . .	20 8 13	20 20 8	10 10 8	1,070		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate	Remarks.	Type plan and series.
181	GRAIN STORE.	Ft	Ft	Ft.	Sq. Ft.		
	(i) <i>A regiment of cavalry—</i> 2 rooms, each . . .	80	20	12	3,518	To be provided in two blocks	
	(ii) <i>A mountain battery—</i> Store room . . .	18	16	10	420		
183	GUN SHED.						
	<i>A mountain battery—</i> Shed . . .	48	24	10½		10' verandah in front.	241 } R. 24B } A.
184	HARNESS ROOMS. <i>A mountain battery—</i>	as in item		81	(iii)		29A R.A.
185	MAGAZINE. <i>For a mountain battery</i>	14	14	14	400	The remarks against item 83 apply. <i>For Indian Infantry for small arms ammunition, as in item 109.</i> <i>For Indian Cavalry for small arms ammunition, as in item 43.</i>	
185-A	MAGAZINE FOR EXPLOSIVES.  <i>For a detached company S &amp; M</i> Magazine . . . Gun cotton store . . .	12 7	12 4	10 10	419	A 6' verandah in front See para. 43.	
185-B	NIGHT PICKET GUARD ROOM <i>A mountain battery</i> 1 room . . .	36	12	12	603		
186	ORDERLY ROOM AND OFFICE <i>For a regiment of cavalry or battalion of infantry</i> Commanding officer's office Adjutant's office . . . Quartermaster's office . . . 4 rooms for squadron or double company commanders, each	20 16 16 12½	18 18 18 12	18½ 18½ 18½ 13½	3,769	With a verandah 8½' all round, containing a record room 15' x 7' and a bathroom 7' x 7'. Rent will be assessed under the ordinary rules, subject to a maximum of Rs. 30 per month.	
187	PARADE GROUNDS.	no size	laid down.				
188	PIONEER EQUIPMENT STORES. <i>For pioneer battalions only—</i> Store-room . . .	40	18	9½	1,300	A 10' verandah on one side only. See remarks against item 176.	
189	PIONEER WORKSHOP. Shed Room for carpenter's tools Room for smith's tools Material store Room for n. c. o. in charge . . .	60 12 12 12 12	20 20 9½ 9½ 10	12 12 12 12 12	2,643	For Pioneer battalions only.  To be constructed by the corps, where practicable, under contract.	38 I. I.

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	ft.	Ft.	Sq. ft.		
190	QUARTER GUARD AND CELLS AND QUARTERMASTER'S STORES					Existing quartermaster's stores are not to be enlarged unless absolutely necessary, reasons	
	(i) <i>A regiment of cavalry—</i>						
	Guard room for 12 men	36	16	12	2,300		
	Cells, 2 each	10	10	12			
	Quartermaster's stores, 2 rooms, each	16	10½	12		guards, except under very special circumstances to be fully reported. Each man of the guard is to receive 48 sq. feet.	
	(ii) <i>A mountain battery in the plains or hills—</i>						
	Guard room	28	12	12	2,200	For the Indian personnel of heavy batteries R G A.,	2 I. I. modified.
	Lock-up	12	12	12		guard room 14' x 14' for 1 n. c. o and 3 men, and a lock-up	
	Cells, 2 each	10	10	12		14' x 10' with 8' verandah in front should be given if convenient, this accommodation may be provided in the same block as another building.	
	Quartermaster's store, 2 rooms	16	12	12			
	(iii) <i>A battalion, Peshawar, Rawalpindi, Lahore, Meerut and Lucknow Divisions, Kohat, Bannu, and Derajat Bdes., in the plains or hills—</i>						
	Guard room for 15 men	48	16	12	4,000	This includes accommodation for mobilization stores.	2 I. I.
	Lock up (2 prisoners)	16	12	12			
	Cells, 2 each	10	10	12			
	Quartermaster's stores—						
	1 room	16	14	12			
	1 "	16	23	12			
	1 "	16	30	12			
	(iv) <i>A battalion, Secunderabad Division.</i>						
	Guard room for 15 men	48	16	12	3,620		2 I. I. modified.
	Lock-up (2 prisoners)	16	12	12			
	Cells and stores	as	in	(iii)			
	(v) <i>A battalion, in stations under the Bombay Government.</i>						
	Guard room for 15 men	48	16	12	3,560		2 I. I. modified.
	Lock-up (2 prisoners)	16	12	12			
	Cells and stores	as	in	(iii)			
	(vi) <i>A detached company S. &amp; M.</i>						
	Guard room	33	16	12	2,425	An 8' verandah in front of the whole building	2 I. I. modified.
	Lock-up	12	12	12			
	Cells, 2 each	10	10	12			
	Store room	24	12	12			



Item No.	Buildings.	Length ft	Breadth ft	Height. ft	Plinth area, approximate. sq ft	Remarks.	Type plan and series
196	STABLES— <i>contd</i>						
1	1 stable for 78 mules—						
	2 compartments each for 20 mules, each	140	12	7½	9,950		
	2 compartments each for 18 mules, each	133	12	7½			
	Central passage	276	4	...			
	(ii) For a 7-pr. gun battery—						
	2 stables each for 70 mules—					The number of animals is:—	
	2 compartments, each for 16 mules, each	126	12	7½	8,930	Ponies . . . . . 6	
	2 compartments, each for 17 mules, each	113	12	7½		Ordnance mules . . 127	
	Central passage	24½	4	...		Baggage " . . . 80	
						TOTAL . . . 212	
	1 stable for 72 mules—						
	4 compartments, each for 18 mules, each	126	12	7½	9,180		
	Central passage	25½	4	...			
	(iii) For a regiment of cavalry—						
	4 stables each for 78 horses each	292½	14	...	11,172	For each squadron 154 stalls	18 B. C.
	Central passage	29½	4	...		Each stall to be 14' x 7½'.	
	4 stables, each for 76 horses, each	285	14	...	10,837	Stalls to be arranged in two rows with a central passage 4' wide.	
	Central passage	286½	4	...			
196-A	STORE ROOMS						
	(i) For a regiment of cavalry—						
	1 room	45	20	12	1,104		
197	VETERINARY HOSPITAL (OR HORSE INFIRMARY)						
	(i) A regiment of cavalry—						
	2 rooms, each	13	9	13	5,990	Boilers required for boiling grain are to be supplied and maintained by the M W S	103 I. C.
	4 compartments, each	25½	12	13		6½ verandah on three sides	
	2 sleeping rooms	13	9	13		Jhamps are also allowed when considered absolutely necessary by the veterinary officer	
	4 loose boxes	11	8	14			
	2 " "	17½	2	13			
	Central passage	112½	4	16½			
	Isolation block containing—						
	1 box	14	14	15½	536	A 5½' verandah on two sides, with a store room 5½' x 6' in one verandah	
	(ii) A mountain battery—						
	6 mule standings, each	12	7	10	1,300	Height at eaves 7, sides open, walls at ends. In some stations it may be necessary to give side walls and doors for the boxes as stalls.	
	4 loose boxes, each	12	7	10			
	Veterinary store	13	9	0			
	Central passage	42	4	10½			
198	WELLS OR WATER-SUPPLY (WITH TROUGHS FOR ANIMALS AS REQUIRED).					The maximum number of wells for a regiment of cavalry or a battalion would be 5, i.e., 1 for each squadron or double company and 1 for the hospital; for a mountain battery no well is laid down. Each well should have a broad platform for washing	

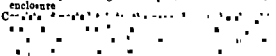


Item No.	Buildings. &c.	Length. Ft.	Breadth. Ft.	Height. Ft.	Plinth area, approximate Sq. Ft.	Remarks.	Type plan and area.	
201	ENCLOSURE WALL OR FENCE.					As required, a wire fence as being less costly is suitable. Not generally given in the hills.		
202	HOSPITAL GUARD-ROOM. <i>In the plains or hills.</i> For a regiment of cavalry, a mountain battery, or battalion					Is not now usually required. The G. O. C. will decide as to the necessity for its provision.		
203	Room for 4 men MORTUARY. <i>In the plains or hills.</i> For a regiment of cavalry, a mountain battery, or a bat- talion—	16	12	12	490	A simple enclosed shed, with a bracket and hook for suspend- ing a spring balance on.		
	A room . . . . .	12	12	...	240			
204	QUARTERS FOR SUB- ASSISTANT SURGEONS. <i>In the hills or plains</i> (i) Senior or 1st grade sub-assistant sur- geon:—					Two sub-assistant surgeons are authorized for each regiment of cavalry or infantry and one for mountain battery or detached company S. and M. In the hills the height of the main rooms will be reduced to 9', and if the site will not admit of it the courtyard may be omitted.	33	
	1 Room . . . . .	16	12	13½	738			
	1 " . . . . .	12	12	13½				
	8' verandah in front . . . . .	29½	8	...				
	Cookhouse . . . . .	8	6	8	59	An open courtyard 29½' x 17½' containing the cookhouse and bath room to be provided		
	Bath-room . . . . .	4	4	7½	32			
	Latrine . . . . .	6	5	7½	60			
	(ii) 2nd or 3rd grade sub-assistant sur- geon:—							
	1 Room . . . . .	16	12	13½	433		33	
	8' verandah in front . . . . .	16	8	..				
	Cookhouse . . . . .	8	6	8	59	An open courtyard 32' x 16½' containing the cookhouse and bath room to be provided.		
	Bath-room . . . . .	4	4	7½	32			
	Latrine . . . . .	6	5	7½	60			
205	QUARTERS FOR HOSPI- TAL SERVANTS (i) <i>In the plains</i> For each married man, a separate quarter . . . . .	12	10	10		For scale see A. T. of the unit. One-third are to be provided for married men and two- thirds for single men; the quarters for the latter should be divided into rooms to meet the different castes. If the single men's accommodation cannot be combined, it may be necessary to increase the size somewhat.		
	For each single man, floor area . . . . .	6	10	10				
	(ii) <i>In the hills.</i> For each married man, a separate quarter . . . . .	10	8	8				
	For each single man, floor area . . . . .	5	10	8				
206	QUARTERS FOR WARD ORDERLIES. For a regiment of caval- ry, a mountain battery, or a battalion.							
	(i) <i>In the plains.</i> 1 married man's quarter Room for 3 single men . . . . .	12	10	10	450			
	(ii) <i>In the hills.</i> 1 married man's quarter Room for 3 single men . . . . .	10	10	8			380	
		15	10	8		Only to be provided at the discretion of the O. C. the station when the hospital is at a considerable distance from the lines.		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and section.
		Ft.	Ft.	Ft.	Sq. Ft.		
207	<b>KAHARS' HUT.</b> <i>For a regiment of cavalry, mountain battery, or battalion or wing.</i> (i) <i>In the plains.</i> Hut for 4 kahars . . . . . (ii) <i>In the hills.</i> Hut for 4 kahars . . . . . (iii) <i>For a detached company S. &amp; M.—</i> Hut for 4 kahars . . . . .	20	12	10	360	To be built near the quarter-guard. Ditto do.	
208	<b>STOVES FOR BURNING DEJECTA.</b>	as	in	item	162		
209	<b>WELL AND WASHING PLATFORM.</b>					Should have a broad and well raised platform, but without roof and screen wall for washing purposes. A separate well for drinking purposes is not usually required. Water will usually be laid on in the hills	
	<b>LASCARS' QUARTERS.</b>						
210	<b>QUARTERS FOR LASCARS (HIGHER GRADE).</b> (i) <i>For each man 2 rooms each with a 6' verandah . . . . .</i> (ii) <i>For each man 1 room with a 6' verandah . . . . .</i>	12	10	13½		Authorized for serangs, tindals, clerks, and 1st class mistris of the S. M. M. establishment. Authorized for 2nd class mistris of the S. M. M. establishment.	
211	<b>QUARTERS FOR LASCARS (LOWER GRADE)</b> (i) <i>For each married man, 1 room . . . . .</i> (ii) <i>For each single man, floor area . . . . .</i>	12	10	13½		Authorized for marine, coast defence and lower grade lascars of the S. M. M. Married quarters are to be provided for 10 per cent of the strength. On Butchers' Island 80 sq. ft. per man in separate huts is allowed as a minimum.	
	<b>SUPPLY AND TRANSPORT CORPS.</b>						
212	<b>BAKERY.</b> (i) <i>Bread store.</i> <i>For a garrison of—</i> 300 men and under . . . . . 300 to 700 men . . . . . 700 to 1,000 „ . . . . . 1,000 to 1,400 „ . . . . . 1,400 to 2,000 „ . . . . . (ii) <i>Wheat or flour store.</i> <i>For a garrison of—</i> 300 men and under . . . . . 300 to 700 men . . . . . 700 to 1,000 „ . . . . . 1,000 to 1,400 „ . . . . . 1,400 to 2,000 „ . . . . . (iii) <i>Shed for cleaning wheat.</i> <i>For a garrison of—</i> 300 men and under . . . . . 300 to 700 men . . . . . 700 to 1,000 „ . . . . . 1,000 to 1,400 „ . . . . . 1,400 to 2,000 „ . . . . .	14	14	...	310	All windows to open inwards and to be fitted with fine galvanised wire netting. Bread racks should consist of stone uprights, with shelves of galvanised wire netting 2' wide and 1½' apart. Intended for 1 month's consumption.	65 S. & T.
		16	16	...	390		
		18	18	...	460		
		20	18	...	510		
		20	20	...	550		
		14	14	10	310		
		16	16	10	390		
		20	18	10	510		
		25	18	10	610		
		30	20	10	750		
		16	14	10	304	When flour is received from an out-station mill, this shed will not be required. It should have open archways on one side.	
		16	16	10	380		
		20	18	10	510		
		25	18	10	610		
		30	20	10	790		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	sq. Ft.		
212	BAKERY— <i>contd.</i>						
	(iv) <i>Bullock shed.</i>						
	For a garrison of 1,600—						
	Shed for bullocks	250	12	9	3,930	Should be a semi-permanent structure.	
	(v) <i>Office.</i>						
	For a garrison of—						
	800 men and under	16	12	...	200		
	300 to 700 men	20	12	...	360		
	700 to 1,200 "	25	12	...	440		
	1,200 to 2,000 "	30	12	...	620		
	(vi) <i>Open shed</i>						
	For a garrison of 1,600—						
	Shed with 8 ovens	10	18½	10	2,490	For method of calculating the number of ovens required see T. P. 66.	
						The ovens (2' 9" high) should be in pairs with a furnace	
	(vii) <i>Covered passage.</i>						
	From ovens to the						
	knending room.						
	(viii) <i>Soojee store</i>	no size given				prevent the cold air affecting the bread before it is baked.	
	(ix) <i>Knending room.</i>					Would only be required in certain parts of India.	
	For a garrison of 1,600						
	men—						
	Knending room	40	20	10	1,440		
	Yeast "	12	8	9		For method of calculating the size required, see the T. P.	66 S &
	Verandah "	27½	8	9		Half a month's supply (400 mannds). Size will vary according to the amount to be stored and strength of garrison	T.
	(x) <i>Fuel store.</i>						
	For a garrison of 1,200						
	men—						
	Shed	20	12	9	300		
	(xi) <i>Well or water supply</i>					1 for each bakery.	
	(xii) <i>Enclosure.</i>						
	For a garrison of—						
	800 men and under	120	100				
	300 to 700 men	150	130				
	700 to 1,000 "	200	150				
	1,000 to 1,400 "	250	120				
	1,400 to 2,000 "	250	200				

Item No.	Buildings.	Length. Ft.	Breadth. Ft.	Height. Ft.	Plinth area, approximate. Sq. ft.	Remarks.	Type plan and series
213	<b>CATTLE AND SHEEP YARDS.</b>						
	(i) <i>Cattle shed.</i>						
	Shed for 40 cattle	72	22	10	1,920	The sheds should be of temporary construction with impermeable floors. Eight bullocks or forty sheep are sufficient for one day's supply for 1,000 men.	2 B, S. & T.
	(ii) <i>Sheep shed.</i>	same as	above		1,920		
	Shed for 200 sheep						
	(iii) <i>Yard for cattle and sheep</i>	no	size	laid down		Mud walls 5' high all round.	126 B C.
	(iv) <i>Yard for fodder.</i>	ditto				Ditto ditto.	
	(v) <i>Well with watering trough.</i>						
	(vi) <i>General enclosure</i>	no	size	laid down		Plenty of space should be allowed for the cattle to move about in.	
213-A	<b>GUARD ROOM.</b>						
	(i) <i>For bullock transport—</i>						
	Guard room	14	15	12	500	To be built in the same block as quartermaster's stores.	
	10' verandah in front					For 3 to 4 or 5 to 6 half troops.	
213-B	<b>OYCE</b>						
	(i) <i>For bullock transport—</i>						
	1 room	10	15	13½	428	To be built in the same block as quartermaster's store.	
	10' verandah in front					For 3 to 4 or 5 to 6 half-troops	
213-C	<b>QUARTERMASTER'S STORES.</b>						
	(i) <i>For bullock transport—</i>						
	(a) For 3 to 4 half troops—						
	Store room for—						
	Half mounting clothing						
	stock and repairing						
	gear	10	15	12	704		
	Grain store	10	15	12			
	10' verandah in front						
	(b) For 5 to 6 half troops—						
	Store room for—						
	Half mounting clothing						
	stock and repairing						
	gear	15	15	12	931		
	Grain store	15	15	12			
	10' verandah in front						
213-D	<b>SICK LIVES.</b>						
	(i) <i>For bullock transport—</i>						
	(a) For 3 to 4 half troops—						
	Pharmacy	10	10	13	616		
	Open shed, with stand- ings for 4 animals, each	12	7	10			
	(b) For 5 to 6 half troops—						
	Pharmacy	12	12	12	878		
	Open shed, with stand- ings for 6 animals, each	12	7	10			

Item No.	Buildings	Length. Ft.	Breadth. Ft.	Height. Ft.	Plinth area, approximate. Sq. Ft.	Remarks	Type plan and service.
214	STORE ROOMS					Each case requires the sanction of the G. of I. Saddle rooms should be included in gear stores.	
	(i) Store room for transport gear	20	size	laid down			
	(ii) Store room for kerosene oil			ditto			
	(iii) Store room for malt liquor			ditto		Imported malt liquor is to be stored in well built rooms with pucca floors, sloped to carry off the water. At bill stations, this is unnecessary. Ditto ditto.	
	(iv) Store room for rum						
215	INFIRMARIES FOR TRANS- PORT ANIMALS.					Each case requires the sanction of the G. of I. Accommodation should be provided for 10 per cent of the strength. Requires the sanction of the G of I.	
216	TRANSPORT OFFICE.					For scale see A. T. Transport.	
217	SHEDS FOR TRANSPORT CARTS.					Extreme width of a cart is 5' 10" and length, including poles, 15' 8", but poles can overlap.	
218	SHEDS FOR BREAD CARTS.						
	For one cart	18	10	11	290	Sheds for bread carts are authorized; 1 cart should be allowed per regiment or detachment.	
219	SHEDS FOR MEAT CARTS.						
	Same as for bread carts	...	...	...	290	Same as above.	
220	SHEDS FOR BULLOCKS FOR BREAD AND MEAT CARTS.						
	Space per bullock	12	6	...	...	2 bullocks to each cart.	
221	SLAUGHTER HOUSE AND YARD.						
	(i) Slaughter stand	A pucca platform 15' wide, length varying according to requirements, raised a few inches above ground level and sloping into a shallow saucer drain about 2' wide and 1' deep, running into a pucca tank outside the enclosure					70 S. & T.
	(ii) The gallows	 <p>whole length of the gallows connecting with the pucca tank outside.</p>					
	(iii) The meat hanging house.	Should be built near the slaughter stand in a corner of the enclosure, with a door in the outside wall for the issue of the meat. Width 16', height 15', and length according to number of carcases to be stored allowing 3 for each bullock and 1' for each sheep. Shed to be well ventilated, open in front, with windows in the back wall. Gallows to be given in the meat shed and a pucca floor and drain communicating with the same reservoir outside.					
	(c) Cess-pools and offal pits	...	...	...	...	The reservoir mentioned above is intended merely as a temporary receptacle, and it is necessary that blood and offal should be removed to a distance	
	(e) Well.					As required.	
	(vi) Enclosure wall	...	...	...	...		

Item No.	Buildings.	Length.	Breadth.	Height.	Plinth area, approximate.	Remarks.	Type plan and series.
		Ft.	Ft.	Ft.	Sq. Ft.		
222	WELL FOR TRANSPORT LINES.					Drinking trough will be required.	125 B
223	WORKSHOPS	...	...	...	...	To be built in the same block as quartermaster's store.	
	(a) For 3 to 4 half troops— Blacksmith's shop Carpenter's shop 10' verandah in front.	20 20	15 15	12 12	1,275	To be open in front. A store 8' x 8' for tools to be provided in a corner of each shop.	
	(b) For 5 to 6 half troops— Blacksmith's shop Carpenter's shop 10' verandah in front.	30 30	15 15	12 12	1,854	For other units the sanction of Government of India is required.	
	DAIRY FARM BUILDINGS.						
224	MANAGER'S, ASSISTANT MANAGER'S, OVERSEER'S AND ASSISTANT OVERSEER'S QUARTERS— (Warrant or n. c. o. on unattached list)	...	...	...	...	The provision of quarters will be governed by A. R., I., Vol. II, para. 443. If the manager or overseer is a warrant or n. c. o. on the unattached list, he is entitled to Class D. quarters as in item 10 with subsidiary buildings, except stable, which latter will be provided with the other farm buildings.	
225	OFFICE.						
	(i) In the plains. Manager's room Clerk's room	3 units 1 unit	15 15	...	...	9' verandah in front, the unit of accommodation for the plains is 72 square feet. For all offices minimum of three rooms to be given.	
	Record room	2 units	15	...	...		
	(ii) In the hills Manager's room Clerk's and record room	3 units 1 unit	12 13	...	...	6' verandah in front. The unit of accommodation for the hills is 43 square feet. For all offices a minimum of two rooms to be given.	
226	DAIRY OR BUTTER FACTORY.	According to local conditions					

Item No.	Buildings.	Length. Ft.	Breadth. Ft.	Height. Ft.	Plinth area, approximate. Sq. Ft.	Remarks.	Type plan and series.
227	QUARTERS FOR EURO- PEAN DAIRYMEN, EU- ROPEAN CATTLE YARD OVERSEERS.  (i) <i>In the plains</i> — Each, 1 room . . . . . 14 14 14 1,225 Subsidiary buildings— Cook-house for each . . . . . 10 10 9 170 Servant's quarter for each . . . . . 10 10 9 155  (ii) <i>In the hills</i> — Each, 1 room . . . . . 14 14 12 ... Subsidiary buildings . . . . . as in (i) ... 228 WATER SUPPLY . . . . . ... ..  229 ROADS . . . . .  GRASS FARM BUILD- INGS. 230 MANAGER'S, ASSISTANT MANAGER'S, OVER- SEER'S AND ASSISTANT OVERSEER'S QUAR- TERS. . . . . as in item 224 231 OFFICE . . . . . as in item 225 (i) 232 GODOWN . . . . . size according to local conditions. (ii) 233 WATER SUPPLY . . . . . Should usually be obtained from wells.						

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